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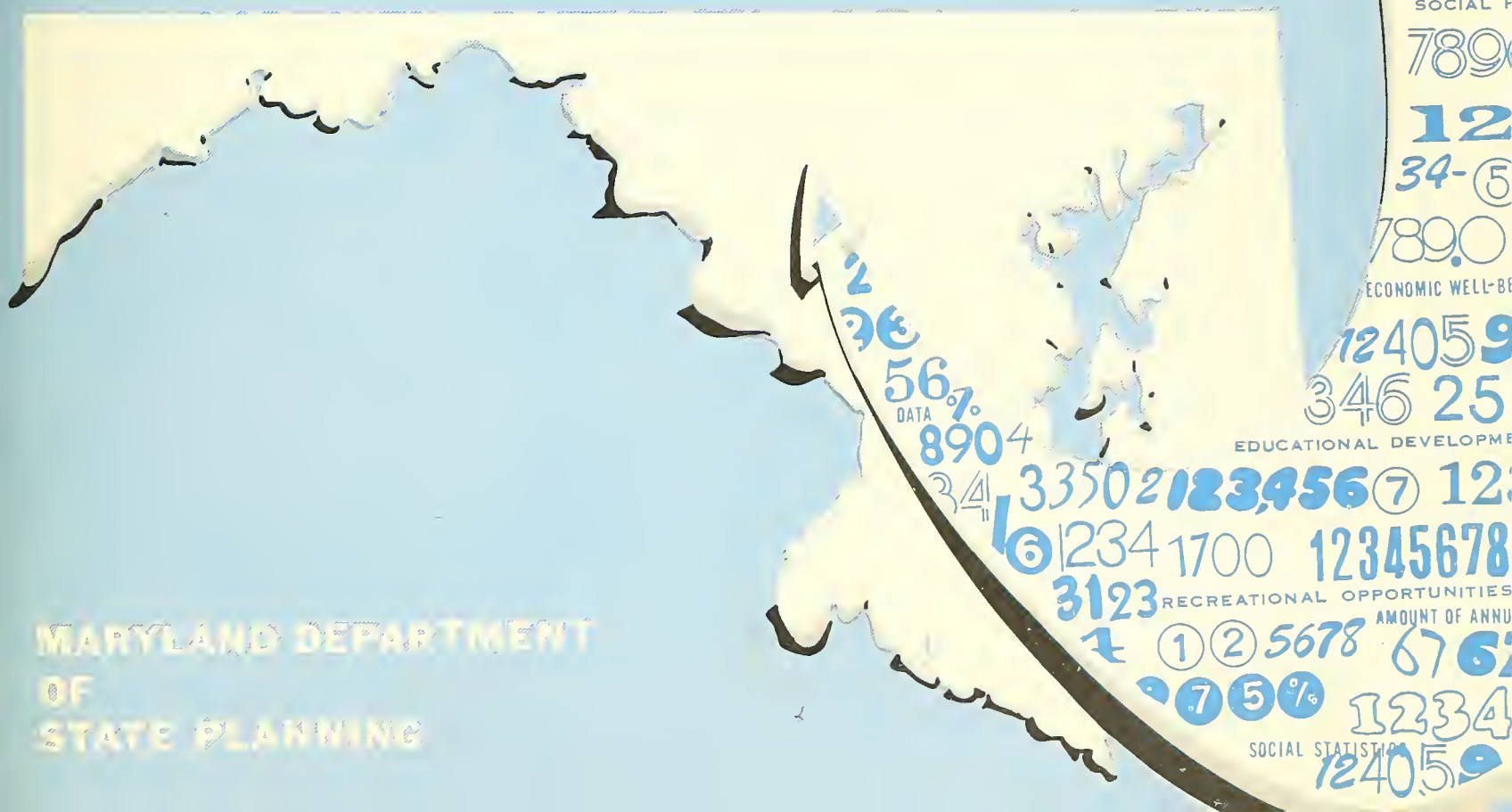
SOCIAL INDICATOR REPORT

A CONCEPTUAL APPROACH



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OF
STATE PLANNING

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SOCIAL INDICATOR REPORT :

a conceptual approach

Maryland. State Planning Dept.
Publications.

Maryland Department of State Planning

THIS REPORT WAS PREPARED WITH THE ASSISTANCE OF
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APRIL 1976

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March 1976

Dear Reader:

We are pleased to hereby transmit a copy of the Social Indicators Report for Maryland. The report was prepared by the Department of State Planning with the assistance of Peat, Marwick, Mitchell & Co. of Washington, D.C. We hope you will find this initial report valuable as a compilation of existing information on various areas of social concern. It should be noted that this effort was conducted as a test of the feasibility and desirability of preparing State and county level social indicators. We are, therefore, most eager to receive your comments on this report and your suggestions for future updating.

The report presents a broad array of social data in a single document which should prove helpful to both planners and program managers. The county level information permits assessment of areas of strength and areas of need within the State. The indicators raise many questions concerning why conditions exist, but the indicators, alone, cannot provide the answers. We would like to work with you in selected case studies to examine the possible causes for specific outcomes.

The task of developing the social indicators was begun with an ambitious set of goals and expectations as defined in a June 1975 Interim Report. As work progressed, we were forced to scale down the final product of this first round effort due, in some cases, to the absence of data and, in other cases, to the lack of data found to be comparable to the 1970 Census. Some indicators were eliminated because the results did not appear meaningful or significant. The greatest difficulties encountered during data collection and indicator construction are referenced in the text.

We hope that you will work with us to improve future versions of the social indicators. You might consider the following questions as you read and review this document.

1. Are there any current plans for producing new data that would strengthen the social indicators?

2. In areas where availability has been a problem, is it worth the effort needed to develop new data sources?

3. In what ways are the social indicators useful to you and others?

4. What further research could be conducted to enhance the value of one or more of the indicators?

5. Do the indicators in your field seem reasonable? What postulated explanations can be given for the outcomes?

We should like to work with you and other appropriate individuals so that this report can be most beneficially utilized. We are hopeful that it will stimulate activity toward developing a better data base for future efforts. We look forward to hearing from you shortly.

Sincerely,

Vladimir Wahbe

VW:cem

Attachment

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I. INTRODUCTION

Social indicators have evoked the interest of many groups. Social scientists in various disciplines, public policymakers involved in social policy formulation at various levels of government, and business leaders in the private sector have increasingly directed their attention to the problems involved in developing a system of social indicators by means of which socioeconomic status could be monitored and measured. While most government agencies have developed some type of information system to aid policymakers in public policy formulation, specific interest in the topic of generating social indicators as a component part of such a system is relatively new.

The social indicators presented in this report were constructed explicitly to work toward providing just such a component part of an overall system defined in the Human Services Planning and Coordination Project (HSP&CP).

The HSP&CP was designed to assist:

- executive and legislative policymakers in determining how best to allocate Maryland's resources in the most efficient, effective manner possible, toward meeting the human service needs and improving the life condition of the citizens of Maryland.

- nongovernmental and sub-state governmental providers of human services to better serve their clients by providing:

    - a State planning process for human services with which to coordinate and through which to offer input;

    - access to data resources with which to identify needs and plan service delivery.

As one of the first steps in achieving the HSP&CP project purposes, social indicators were constructed to aid in measuring past and present social conditions and needs and changes therein. Based on this baseline work and on other concurrent work, it will be possible to develop substantive analyses of issues related to planning and coordination of human services. The HSP&CP project work, designed to focus on the improvement of planning and coordination in Maryland, is an ongoing process. It is not intended to produce a single, final document, but rather a series of reports and papers issued as various work tasks are completed. The tasks, of which this report is one, constitute the components of a model human service process that can be replicated by other state and local agencies.

SOCIAL INDICATOR OBJECTIVES

This report provides an initial system for assessing socioeconomic status and monitoring changes in this status in the State of Maryland. It is not the intent of this report to provide a basis for program evaluation or to suggest cause and effect relationships.

The indicators developed were designed from a pragmatic point of view. Design and development criteria were to provide:

- topical (across functional planning areas) data in a succinct form for use by planners, program managers, and policymakers;

- logical and useful indicators of specific areas of social concern which depict the present status of the population or subgroups within it with respect to that area of social concern; and

- an ongoing system that will aid in monitoring the status of the population over time and provide planners, program managers, and policymakers with a basis for understanding basic societal trends.

Two types of measures are presented in the report.

1. Social Statistic - a basic measure of a population characteristic or attribute. The social statistic(s) can be an absolute number (e.g., population), an average (mean household income), a ratio (e.g., per capita income), or a distribution (e.g., number of persons under 5, number of persons 6 to 12, etc.).

2. Social Indicator - a single measure usually expressed as an indicator value composed of two or more social statistics which logically and statistically depict the status of the population with respect to a specific area of social concern. For example, a single value between 0-100 derived from measures of education, occupation, and income would depict the socioeconomic status of the population.

While the indicators that have been developed have partially achieved the basic objectives, additional and better data can be generated and the present indicators refined for subsequent social indicator reports. It is anticipated that the reports will be issued biannually.

The present report provides a baseline for monitoring social change over time, as well as social differences among counties, and between urban and rural jurisdictions.

SOCIAL INDICATOR FRAMEWORK

To provide social indicators or measures of status which are useful to planners, program managers, and policymakers requires that each statistic and indicator be designed to provide information or knowledge with respect to specific areas with which these individuals are concerned. Social indicators traditionally are used for measurement of population status, policy formulation, and planning. This study is aimed at meeting user needs by developing measures of population status and providing inputs for policy formulation and planning. The social indicators in this report were not designed for evaluation.

ACTIVITY SECTOR APPROACH

To design the social indicator system in a manner responsive to the basic needs of planners and policymakers, it was decided at the outset of the study that the system would be structured around the Department of State Planning's activity sector framework.

The HSP&CP identified nine activity sectors:

- Preservation and Improvement of Health;
- Promotion of Public Safety and Justice;
- Advancement of Economic Well-Being;
- Promotion of Educational Development;
- Provision of Adequate Housing and Community Development;
- Meeting Human Transportation Needs;
- Expanding Recreational Opportunities;
- Enhancement of Human and Environmental Interaction; and
- Development of Social Potential.

Each of the activity sectors was designed as a logical planning unit and was not designed to correspond directly on a one-to-one basis with state operating agencies. In fact, the sectors generally cut across departmental lines of responsibilities. Therefore, these activity sectors, as planning units, tend to be topical in approach and provide an added scope to the planning process.

The activity sector approach was selected for its comprehensiveness; examining needs, programs, and resources through the framework of existing state agencies would have been too limiting. The approach is presently being tested to determine whether overlapping services or responsibilities can more easily be detected with the activity sector framework. It is anticipated that gaps or the absence of programs will also be more obvious by use of this framework.

The framework serves the additional purpose of being a method for categorizing information. A vast amount of information is produced, but it cannot be analyzed until it is organized in some fashion. Furthermore, the framework lends itself to both manual and automated data storage and retrieval. It also offers the potential of a compatible system for organizing information and evaluating and analyzing needs that can be adopted by all human service agencies in Maryland.

These activity sectors provide the basic structure for development of the social indicator system. It was determined at the outset of the study that while the social indicator system would be structured around the activity sectors, the system would emphasize seven human services sectors:

- Preservation and Improvement of Health;
- Promotion of Public Safety and Justice;
- Advancement of Economic Well-Being;
- Promotion of Educational Development;
- Provision of Adequate Housing and Community Development;
- Development of Social Potential; and
- Recreational Opportunities.

However, since transportation and environment are integral to each of the above sectors, it was determined that the system should take into account, to the extent possible, key factors from each of these areas.

To accomplish this, these two activity sectors were treated as overlay sectors. Under this approach, transportation, and environmental concerns were, to the extent possible, considered as part of the seven activity sectors identified for social indicator development.

In addition to the seven sectors, it was also determined that basic socioeconomic factors tended to be associated with all of the sectors. Thus, rather than repeat (at the statistical level) such things as income, a basic socioeconomic status and demographic section was developed and used as part of each activity sector.

The use of the activity sectors as a basic structure for the social indicator system provides only broad areas of definition. Social indicators and statistics, to be useful, must address specific areas of concern in each activity sector.

Within each activity sector a set of areas of concern was defined as the major component of social interest. For example, three major areas of concern were defined for housing: housing availability, housing need, and housing comfort. Each of these areas of concern considers a major aspect of the housing activity sector.

Finally, a set of statistics that could best measure, reflect, or identify some aspect of each area of concern was defined. These statistics were identified and then screened based upon data availability, frequency of publication, and level of geographic detail. Upon review and analysis, a final set of basic social statistics was selected for inclusion.

For purposes of comparison, social indicator values are shown for each county and the City of Baltimore. In addition, a statewide average, an urban county average, and a rural county average are shown. The urban counties are those counties within the Baltimore and Washington Standard Metropolitan Statistical Areas.

The following jurisdictions are located in either the Washington or Baltimore SMSAs:

- Anne Arundel;
- Baltimore;
- Carroll;
- Charles;
- Harford;
- Howard;
- Montgomery;
- Prince George's; and
- Baltimore City.

This report presents only those areas for which reasonable indicators could be developed based on the final data set. A more comprehensive set was originally hypothesized. It is anticipated that, as data are improved and additional analysis is conducted, the social indicator set can be refined.

Finally, no attempt has been made to publish all of the data acquired or to produce a handbook of statistics. The basic data collected and the statistical information are available, however, on a request basis from the staff members of the Department of State Planning.

II. METHODOLOGY

While a more detailed methodology, as well as an accounting of data and of areas needing development and improvement, is presented in a separate User's Manual, this section presents a brief description of the methodology used for indicator development and construction.

PRELIMINARY DESIGN PHASE

The preliminary design phase provided the analytical framework for the development of the social indicators. During this phase, the activity sectors were established as the basic framework. Within each activity sector, areas of concern, social statistics and specific data element requirements were defined. Data element requirements are the data used to create a social statistic (e.g., population and number of murders are the data elements in the statistic, murders per 10,000 population).

A candidate set of social indicators to measure these concerns was postulated based on social theory, previous research and specialized knowledge of each activity sector. The methodology that guided the initial work was the concept that a relevant social indicator could and should be constructed for a specific area of concern, and that each indicator would be comprised of a certain set of statistics. An ideal set of social statistics was then proposed as the major component of each postulated set of social indicators. The outputs of this step were: (1) the identification of activity sectors and areas of concern, and (2) a candidate set of social statistics for each activity sector. The preliminary set of statistics was then refined and put into actual data sets which allowed for statistical analysis and indicator construction.

DATA SET ACQUISITION PHASE

In this phase, data sources were identified and data collected. Identification of data sources required that a wide variety of agencies be contacted to obtain copies of their publications, unpublished data, and supplemental sources. Some suggestions about inclusion, exclusion, and categorization of data were incorporated at this stage. Based on the results of the data inventory, the ideal set of social statistics developed in the initial stages had to be reduced. Reduction occurred as a result of two factors. First, certain data were not available in any form. Second, certain data were not in a form suitable for use in the analysis (e.g., the data were not available at the county level). In the User's Manual a framework for data acquisition and a monitoring system to improve subsequent social indicator reports are discussed.

After the data sets were established, a decision was made as to the years for which the social indicators were to be produced: 1970 and 1973. Several factors were taken into account in making this decision, as follows:

- Recent rather than historical trends were desired.
- 1970 census data provides the best benchmark point.
- 1973 was the most recent year for which most data were available.

A number of other social statistics were eliminated because they were not available for both 1970 and 1973. In subsequent reports, it is hoped that these and other statistics will be available for possible inclusion in the indicator.

SOCIAL INDICATOR CONSTRUCTION PHASE

Both correlation analysis and factor analysis were used as means for testing and developing social indicators. Correlation analysis was used to identify the strength of the relationship between any two statistics. The factor analysis was used (1) to

test the initial hypothesis that the statistics included reflect the area of concern, (2) to test the degree to which each statistic in an area of concern was important, and (3) as a means for weighting statistics in the indicator construction process.

The factor analysis was conducted in three steps: (1) the entire data set was subjected to factor analysis to identify initial relationships and clusters of statistics, (2) the statistics for a specific area of concern were subjected to factor analysis to test for reasonableness of the postulated indicator, and (3) based on the results of step two, the statistics included in the areas of concern were reformulated, and a final analysis was performed.

Following these steps, the factor analysis results for each area of concern were reviewed. Based on this review, a decision was made to either 1) develop an index value to be used as the indicator would be developed for the area of concern as originally hypothesized; 2) the hypothesis and the name of the area of concern were changed and an index value developed; or 3) the area of concern was dropped from further consideration at this time since insufficient analytical and/or statisical support was present. It should be noted that the decisions on development of an indicator were based not only on statistical results but also on the judgment of the analysts. At this point of development, each of the indicators can be improved by addition and/or deletion of certain statistics included in any one area of concern. A discussion of these possible improvements is included in the User's Manual.

INDICATOR CONSTRUCTION

The first set of factor loadings* for an area of concern was used as weights to construct the social indicator. The factor loadings were multiplied by the respective social statistics for each county to determine the raw index value (social indicator) for that county. The process is shown below.

*The value which indicates how much a particular variable associates with a factor is called a "loading" and very much resembles a correlation coefficient.

"Y" SOCIAL INDICATOR FOR "X" COUNTY

Component Social Statistics	Social Statistic Value		Factor Loading		Product
Statistic 1	4.1	times	.50	=	2.05
Statistic 2	0.7	times	.31	=	.21
Statistic 3	8.0	times	.21	=	1.68
Statistic 4	0.6	times	.80	=	.48
Statistic 5	1.7	times	.71	=	1.20
Statistic 6	2.0	times	.15	=	.30
TOTAL SCORE/SOCIAL INDICATOR				=	5.92

The process was repeated for each county (and the City of Baltimore) in Maryland. The same methodology was used for constructing each social indicator. To provide comparability over time in a manner similar to the use of "constant dollars," the 1970 factor weights were used to construct both 1970 and 1973 indicators. Therefore, only the statistics change between years; the relationship among component variables is assumed to remain the same. Two other options were considered but discarded in constructing the social indicators: using 1973 factor weights in both years, or allowing the changed statistical relationships among the variables over time to be reflected in changed factor weights. The second option was rejected because ten indicators were developed for 1970, but it was only possible to develop four for 1973. Although the third approach has greater statistical validity, it was discarded because it does not allow for historical time series comparisons.

Some social statistic values which were not rates were normalized to minimize implicit weights generated by unusually large values (e.g., median house value) which would otherwise dominate the indicator irrespective of the factor weight.

For ease of presentation, the raw indicator values produced in the preceding step were scaled to values between 0 and 100 for each county. This step was taken since the raw values are completely relative and provide no frame of reference for the reader. The scaling was accomplished by setting the highest raw value for a particular area of concern to 100 and the lowest to 0. The intermediate raw values were then scaled to corresponding values between 0 and 100. The process is shown below:

County	Raw Value for Social Indicator "Y"		Scaled Indicator Value
County A	150	=	100
County B	80	=	52
County C	30	=	19
County D	-5	=	0

Each of the social indicators that was constructed includes a basic set of demographic variables, since these demographic statistics were found to be highly correlated with different measures of social status. The thirteen demographic variables are presented below.

Variable Number	Variable Name
1	Percent of total population which is non-white
2	Percent white population age 0-17
3	Percent white population age 18-64
4	Percent white population greater than age 64
5	Percent non-white population less than 5
6	Percent non-white population age 5-17

Variable Number	Variable Name
7	Percent non-white population age 18-44
8	Percent non-white population age 45-64
9	Percent non-white population greater than 64
10	Percent population with incomes 0-$3,999
11	Percent population with incomes $4,000 - $9,999
12	Percent population with incomes $10,000 - $19,999
13	Percent population with incomes greater than $20,000

The specific characteristics of a county, as reflected by these statistics, influence and bear upon the social structure, specific social problems, and service demands associated with a particular county. Examples of how these statistics bear upon these areas within specific activity sectors are as follows:

- population growth affects the demand for schools, jobs, housing, and police protection;
- age distribution affects demands for health services, services for the aged, and resources such as available labor force; and
- race is associated with specific status in income, employment, and housing.

III. USE AND LIMITATIONS OF SOCIAL INDICATORS

BASIC USES

The indicators presented in the report were developed as aids in monitoring social change and measuring population status with respect to specific areas of concern. It is intended that these measurements provide the planner, program manager, and the policymaker with a basic understanding of their client population's current status and a notion of how the client population's status is changing with respect to that area of concern. The indicators provide this by allowing the reader to (1) make intercounty comparisons on a particular indicator, (2) observe change over time for a particular county against the 1970 benchmark, (3) make intercounty comparisons over time, (4) make comparisons of each county with the overall statewide status, and (5) identify geographic patterns.

The indicators and the supporting social statistics do not identify specific changing conditions or identify specific problems. However, the indicators do provide a sufficient basis to alert the planner, program manager, or the policymaker to possible problems or changing conditions which merit further analysis or investigation. The additional analysis triggered by the social indicators can be facilitated by the use of the data base which underlies the indicator development.[1]

BASIC LIMITATIONS

It should be strongly cautioned that the indicators (1) in no way provide a basis for evaluation or impact assessment of a particular program or policy and (2) in no way suggest or support cause and effect relationships. For these reasons, it must be emphasized that hypotheses or tentative conclusions derived from the indicators must be substantiated with additional and more detailed research and analysis.

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[1]Appendix A presents a case study to demonstrate the possible uses of social indicators by program managers, planners, and decision makers.

As previously stated, the indicators presented in this report are an initial research effort. As a result of this effort, it is clear that the indicators can be improved, expanded, and/or refined over time. Some of the major limitations which affected the initial research and the composition of the indicators presented include:

- Data limitations which constrained the development of indicators included nonavailable data, noncurrent data, data biased by inconsistent or changing reporting methods, unreliable data, data withheld for confidential reasons, and noncomparable data (e.g., not by county, incomplete years, etc.);

- Indicator strength for some of the indicators presented was not as strong as desirable;

- Single-year presentation of some of the indicators did not enable testing for consistency over time or adequate evaluation of what the indicator measures; and

- Currency of indicator in the best case was 1973 (2 years old). Observations between 1970 and 1973 suggested major change can occur in a 2- or 3-year period. Therefore, using 1973 as an estimate of current status may not be reliable.

IV. DEVELOPMENT OF ADDITIONAL DATA AND FUTURE SOCIAL INDICATORS

At the present time it is anticipated that a social indicator report will be issued every two years. This approach allows sufficient time for significant and measurable change in population status to occur and also provides timely but not redundant and/or unduly expensive planning inputs.

As was stated in the first part of this report, the existing indicators are a beginning effort. Over the next several years it will be necessary to continue to develop new data, update existing information, and improve its accuracy and reliability. This will permit:

- reassessment and strengthening of the existing indicators;
- development of new or alternative indicators which will be more reflective of planning needs;
- development of smaller area data to reflect important subarea phenomena (e.g., Census Tract indicators);
- development of a more comprehensive and complete planning data base; and
- development of more current indicators.

As analysis and development of the social indicators continue, it will be possible to generate better indicators since more experience, more testing, and additional and better data will have been added to the process. Thus over time, it is expected that the indicators can be made to more accurately reflect the needs to be measured.

V. SUMMARY

Table 1 presents the rankings of each of the counties and of the City of Baltimore for all of the social indicators in this report. While ten indicators were developed for 1970, only four of these indicators were also developed for 1973 because data were not available. The ten indicators represent the following activity sectors:

- Preservation and Improvement of Health;
- Promotion of Public Safety and Justice;
- Advancement of Economic Well-Being;
- Promotion of Educational Development;
- Provision of Adequate Housing and Community Environment; and
- Development of Social Potential.

While this summary (Table 1) depicts the rankings for all ten indicators, it is not possible to make direct comparisons among the rankings. The underlying relationships for the construction of a social indicator are unique for each of the indicators.

However, the tabular presentation suggests a number of insights for further study. In reviewing the rankings, it should be kept in mind that generally a rank of one is the most positive relative status while a rank of 24 is the least positive relative status.

TABLE 1

SOCIAL INDICATOR RANKINGS BY JURISDICTION

JURISDICTION	SOCIAL INDICATORS 1970										SOCIAL INDICATORS 1973			
	Socio-economic Status	Employ-ment	Income Sufficiency/ Affluence	Housing Availability and Cost	Housing Quality	Public Safety	Family Structure	Well-Being of Children	Health Status	Educational and Socio-economic Status	Employ-ment	Income Sufficiency/ Affluence	Public Safety	Health Status
Allegany	12	16	16	20	12	9	15	8	17	11	14	13	6	16
Anne Arundel	5	5	6	5	5	23	7	7	12	5	4	6	21	7
Baltimore	4	4	3	4	4	21	8	3	7	4	6	3	19	5
Calvert	17	15	13	11	15	16	13	12	14	16	10	15	5	11
Caroline	20	21	22	22	21	4	16	23	19	21	23	21	2	19
Carroll	11	8	8	9	8	7	9	13	10	13	7	7	4	6
Cecil	13	11	9	13	10	15	10	20	5	12	11	9	13	9
Charles	7	9	11	7	8	18	2	9	2	8	5	11	10	3
Dorchester	22	23	20	21	23	3	24	14	23	23	22	22	15	23
Frederick	9	8	7	10	11	17	12	17	9	10	8	8	11	13
Garrett	23	19	24	23	19	6	11	1	13	22	17	23	8	12
Harford	6	7	5	6	6	12	3	10	6	6	12	5	16	8
Howard	3	2	2	3	2	19	1	6	8	2	2	1	22	1
Kent	18	20	17	17	20	1	18	19	15	17	19	18	1	17
Montgomery	1	1	1	1	1	20	5	2	3	1	1	2	18	4
Prince George's	2	3	4	2	3	22	4	4	1	3	3	4	23	2
Queen Anne's	19	18	18	18	18	10	17	21	16	18	20	16	7	15
St. Mary's	8	13	14	8	13	2	6	5	4	7	13	14	9	10
Somerset	24	24	21	24	24	8	23	24	20	24	24	20	3	22
Talbot	15	17	12	15	17	11	19	15	22	14	18	12	12	18
Washington	10	10	10	12	7	14	14	11	11	9	9	10	14	14
Wicomico	14	12	19	16	14	13	21	16	18	15	15	19	17	21
Worcester	21	22	15	19	22	5	20	18	21	19	21	17	20	20
Baltimore City	16	14	23	14	18	24	22	22	24	20	16	24	24	24

By comparison, Montgomery County ranked very high in eight indicators, ranging from first to fifth in relative position. However, it ranked 20th in public safety, indicating a relatively high frequency of crime. The City of Baltimore ranked relatively low for most of the areas in 1970.

In reviewing the rankings, it is interesting to compare them with the socioeconomic status indicator. It is believed that there is a positive correlation between the population, income, and occupation statistics making up the SES scores and those statistics making up other scores. Generally, the urban counties (excluding the City of Baltimore) have higher ranks on the social indicators than do the rural counties.

The public safety indicator has the reverse relationship and the rural counties rank higher than the urban counties. This can be explained through higher levels of violent and property crime per capita in the urban counties than in the rural counties. The City of Baltimore had the highest levels of violent and property crimes per capita and, accordingly, ranked lowest in terms of the public safety indicator.

The counties have the following patterns: (1) the urban counties generally ranked highest followed by (2) counties in southern Maryland, (3) western Maryland and (4) the Eastern Shore. The counties which comprise the regions are:

- Urban - Anne Arundel, Baltimore, Carroll, Howard, Prince George's, and Montgomery;
- Southern - Calvert, Charles, and St. Mary's;
- Western - Allegany, Frederick, Garrett, and Washington; and
- Eastern Shore - Caroline, Cecil, Dorchester, Kent, Queen Anne's, Somerset, Talbot, Wicomico, and Worcester.

Urban counties, in general, have the highest status on all social indicators except public safety. Montgomery, Prince George's, and Howard Counties have the highest relative ranks of all Maryland counties. This probably reflects the influence of the Federal Government and other employment concentrations in the Washington, D.C. SMSA. Baltimore County follows the pattern of the Washington SMSA counties and is heavily influenced by the City of Baltimore. The remaining urban counties rank in the following order: Anne Arundel, Harford, and Carroll. This order of ranking is due to the influence of the major urban centers. Anne Arundel's rank is apparently influenced by both the Washington and Baltimore SMSAs, the presence of the State capitol and its recreational opportunities. Carroll and Harford Counties are transitional counties and are on the periphery of the major urban centers and fare about mid-range in the rankings.

Southern Maryland has been historically a rural area, but in recent years it has been impacted by the growth of the Washington SMSA. Charles County has the highest overall rank of the three counties in this area and is becoming increasingly urban in its characteristics (e.g. Charles County ranks seventh in socioeconomic status, ninth in employment, eleventh in income sufficiency/affluence, and eighteenth in public safety). Charles County was included in the Washington SMSA in 1973. Calvert and St. Mary's Counties are rural and their ranks may be influenced by recreational opportunities and their proximity to the Washington SMSA.

The Western Maryland counties decline in rank the farther west they are. Garrett, Maryland's western most county, has a low composite rank which may be associated with lack of employment opportunities. However, Garrett County ranked highest in well-being of children and sixth in public safety. Allegany and Washington Counties have higher relative ranks overall than Garrett County which may reflect the existence of urban places within those counties. Washington County has the highest relative ranks overall of the three western Maryland counties and surpasses several urban counties in some social indicators.

The Eastern Shore counties as a group have the lowest composite ranks of all counties in Maryland. The Eastern Shore counties, which provide recreational or economic opportunities and are closer to the major urban centers, receive higher rankings than those counties which do not possess these attributes.

Somerset, Dorchester, and Caroline rank lowest of all the Eastern Shore counties. These three counties provide few economic opportunities as shown by their low ranks on the socioeconomic status, employment, and income sufficiency/affluence indicators. The remaining counties on the Eastern Shore have higher composite ranks than these counties but not as high as the urban counties. The rank of Wicomico County probably is influenced by the presence of Salisbury which is the hub of the lower Eastern Shore. Worcester County is influenced by the large seasonal population of Ocean City. Kent, Queen Anne's, and Talbot Counties provide recreational opportunities for the Washington and Baltimore SMSAs. Cecil County is influenced by the Wilmington SMSA.

VI. SOCIOECONOMIC STATUS

SOCIOECONOMIC STATUS SCORES

Socioeconomic status (SES) should be considered as a relative measure of the State, counties, and the City of Baltimore in terms of income, education, and occupation. The indicator value is not a measure of good or bad but is simply an indicator of the population characteristics. Ranking provides a simple mathematical framework to assist in determining differences among counties.

Table 2 presents the index values calculated for each county and for the State as a whole. A high indicator value results from a combination of high income, high levels of education, and the more highly skilled occupations. Conversely, lower indicator values result when education and income are low and occupations are of a less skilled nature. The State value represents the aggregate relative State socioeconomic status.

The urban counties--Montgomery, Prince George's, Baltimore, Anne Arundel, Howard, and Harford--have the highest SES scores and each has a score higher than the average score for the State. Conversely, the rural counties tend to have scores lower than the State average. The lowest scores are found in the Eastern Shore counties, and in Garrett County (ranked 23) in Western Maryland.

The generally higher SES scores found in the urban counties can be attributed in part to the economic conditions of the urban areas which provide, relative to rural areas, accessibility to more and higher paid jobs. These jobs in turn attract more highly educated individuals.

The rural counties do not have the same job availability and economic growth associated with the urban counties, such as Montgomery and Prince George's Counties. As a result, there is a much lower proportion of highly paid, highly educated individuals. In addition, the more dynamic suburban areas attract the more highly educated individuals from the rural areas thereby further reducing the proportion of persons with higher levels of education and income earning potential.

The City of Baltimore, which ranks relatively low, must be considered independently from the balance of the State since Baltimore is unique in size and composition. While Baltimore provides a large number of jobs, a large proportion of the persons holding the jobs live in the adjacent urban counties. Conversely, the City of Baltimore appears to attract the less well paid and educated individuals. As a result, Baltimore's score tends to be low while the adjacent urban counties tend to have high scores. The continued out-migration of the well educated, better paid population to the adjacent urban counties compounds this problem.

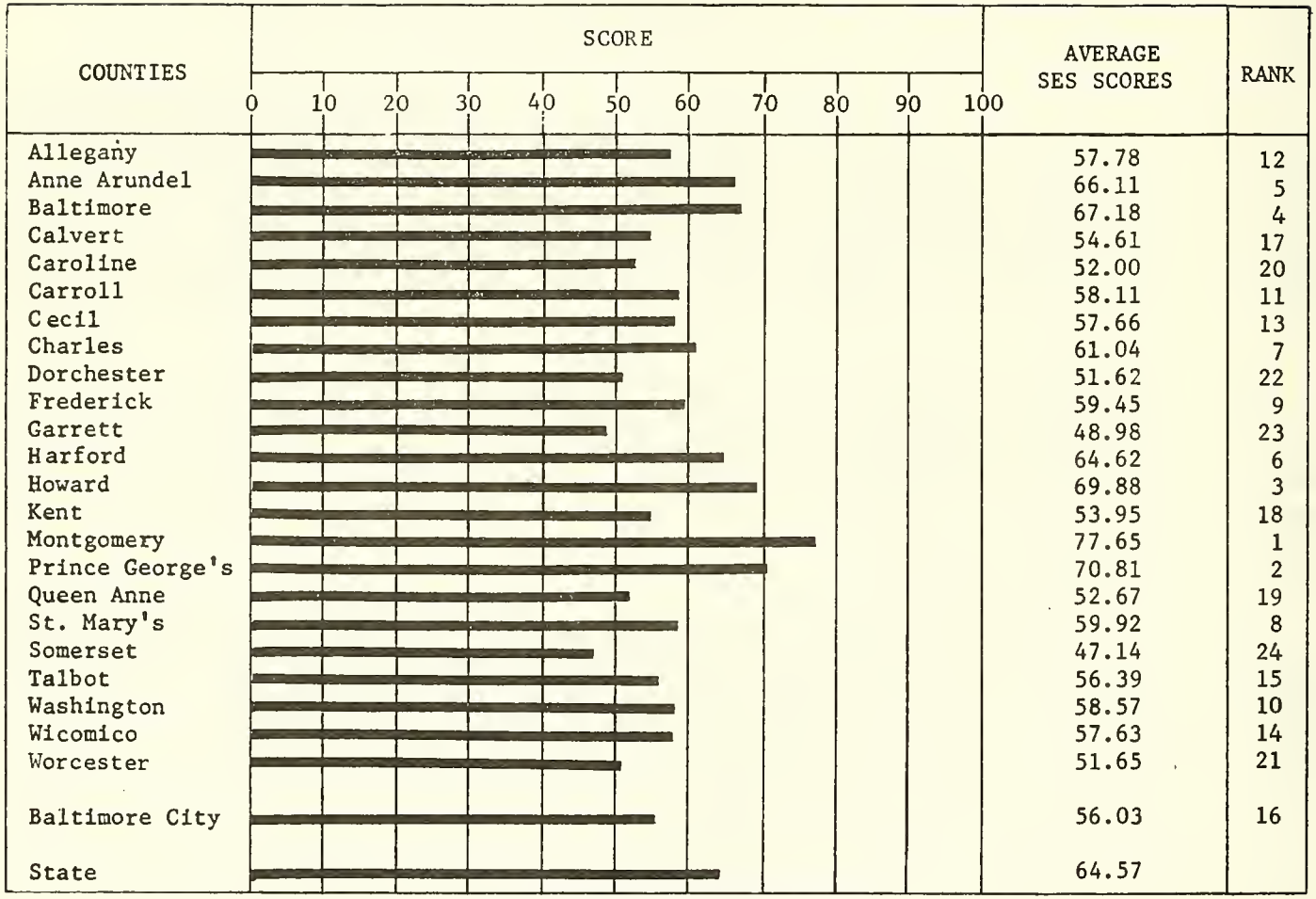
With the exception of Prince George's County, the rural counties and the City of Baltimore have a higher proportion of non-white population than found in the urban counties. The major occupations for the non-white population tend to be in the lower paying categories of operators and services. Conversely, the white population generally holds jobs in the relatively high paying professional/technical occupations. These conditions further explain the rural/urban county differences in terms of socioeconomic status scores.

Differences in SES indicator values are more easily understood by examining each component index score shown in Table 3. For example, Carroll County has a high income distribution score but relatively low occupation and education scores, with the net result that Carroll County ranks number 11. Tables 4 through 10 provide additional direct information on the actual values for each county in terms of occupation, income, education, population, and age distribution.

In conclusion, these indicator values provide a relative status for each county which should be looked at in light of other social characteristics and indicators present in the subsequent portions of this report. In addition, an educational-socioeconomic indicator developed on a different basis is presented in the promotion of educational development activity sector.

TABLE 2

1970: SOCIOECONOMIC STATUS SCORE



Note: Indicator values have been scaled between 0 and 100 to provide a frame of reference.

TABLE 3

1970: FAMILY INCOME DISTRIBUTION/
OCCUPATION/EDUCATION/SES SCORES

COUNTIES	(1) SES SCORES Family Income	(2) SES SCORES Occupations	(3) SES SCORES Education
Allegany	66.12	58.29	48.94
Anne Arundel	80.30	63.50	54.48
Baltimore	83.01	64.90	53.64
Calvert	68.52	52.28	43.02
Caroline	62.49	52.11	41.41
Carroll	75.69	55.44	43.21
Cecil	72.32	54.53	46.14
Charles	75.64	57.35	50.14
Dorchester	63.74	52.73	38.80
Frederick	73.90	57.56	46.88
Garrett	54.98	51.92	40.03
Harford	77.95	62.12	53.80
Howard	84.60	65.91	59.13
Kent	65.11	51.43	45.31
Montgomery	88.70	72.51	71.73
Prince George's	82.97	67.40	62.07
Queen Anne	65.23	51.80	40.97
St. Mary's	68.87	58.48	52.41
Somerset	54.31	51.75	35.35
Talbot	66.78	54.74	47.65
Washington	70.17	57.26	48.28
Wicomico	68.52	57.83	46.54
Worcester	62.20	51.68	41.07
Baltimore City	68.67	57.62	41.80
State	77.58	63.00	53.12

Source: Derived from the U.S. Bureau of the Census, Census of Population, 1970, General Social and Economic Characteristics, Final Report PC(1)-C22, Table 122.

TABLE 4

STATE OF MARYLAND
1970 MAJOR OCCUPATION GROUP BY RACE AND SEX

MAJOR OCCUPATION GROUP	TOTAL	WHITE	NON-WHITE	PERCENT		
				TOTAL	WHITE	NON-WHITE
Male Employed, 14 yrs. and older	956,645	812,750	143,895	100.0	100.0	100.0
Professional/Technical/Managers	286,165	269,199	16,966	29.9	33.2	11.8
Clerical/Sales	145,960	131,504	14,456	15.3	16.2	10.1
Craftsmen	188,284	169,088	19,196	19.7	20.8	13.3
Operators	133,845	101,050	32,795	14.0	12.4	22.8
Service Workers	71,838	51,333	20,505	7.5	6.4	14.3
Laborers, Except Farm	52,974	33,496	19,478	5.5	4.1	13.5
Farmers	17,616	15,229	2,387	1.9	1.9	1.7
Occupation Not Reported	59,963	41,851	18,112	6.3	5.1	12.6
Female Employed, 14 yrs. and older	596,102	477,565	118,537	100.0	100.0	100.0
Professional/Technical/Managers	121,553	104,239	17,314	20.4	21.8	14.6
Clerical/Sales	267,708	237,652	30,056	44.9	49.8	25.3
Craftsmen	9,236	7,622	1,614	1.5	1.6	1.4
Operators	55,655	40,656	14,999	9.3	8.5	12.7
Service Workers	95,418	56,374	39,044	16.0	11.8	33.0
Laborers, Except Farm	4,085	2,678	1,407	0.7	0.6	1.2
Farmers	2,033	1,702	331	0.3	0.3	0.3
Occupation Not Reported	40,414	26,642	13,772	6.8	5.6	11.6
Total, Male and Female	1,552,747	1,290,315	262,432	100.0	100.0	100.0
Professional/Technical/Managers	407,718	373,438	34,280	26.3	28.9	13.1
Clerical/Sales	413,668	369,156	44,512	26.6	28.6	17.0
Craftsmen	197,520	178,710	20,810	12.7	13.7	7.9
Operators	189,500	141,706	47,794	12.2	11.0	18.2
Service Workers	167,256	107,707	59,549	10.8	8.3	22.7
Laborers, Except Farm	57,059	36,174	20,885	3.7	2.8	8.0
Farmers	19,649	16,931	2,718	1.3	1.3	1.0
Occupation Not Reported	100,377	68,493	31,884	6.5	5.3	12.1

Source: U.S. Census, General Social and Economic Characteristics, 1970.

TABLE 5

INCOME DISTRIBUTION BY INDIVIDUAL INCOME TAX RETURNS

1970

JURISDICTION	% LESS THAN $4,000	% $4,000 - $9,999	% $10,000 - 19,999	% MORE THAN $20,000
ALLEGANY	15	49	32	2
ANNE ARUNDEL	14	36	42	8
BALTIMORE	12	37	41	11
CALVERT	18	42	33	7
CAROLINE	21	50	25	2
CARROLL	15	43	37	4
CECIL	16	48	31	4
CHARLES	15	37	41	6
DORCHESTER	24	47	25	4
FREDERICK	16	44	35	5
GARRETT	23	53	22	2
HARFORD	15	37	40	8
HOWARD	12	30	42	16
KENT	22	48	26	5
MONTGOMERY	14	26	34	26
PRINCE GEORGE'S	15	35	40	10
QUEEN ANNE'S	21	48	26	6
ST. MARY'S	20	44	30	6
SOMERSET	27	50	19	2
TALBOT	21	44	26	9
WASHINGTON	17	48	31	4
WICOMICO	19	45	31	6
WORCESTER	24	46	24	6
BALTIMORE CITY	19	51	26	3

Source: **State of Maryland, Comptroller of the Treasury, Income Tax Division: Individual Income Tax Returns Filed for the Year 1970.**

TABLE 6

EDUCATION

1970	EDUCATIONAL STATUS - MALES OVER 25					
JURISDICTION	PERCENT WITH LESS THAN 8 YRS	PERCENT WITH 9-11 YRS	PERCENT WITH 12 YRS	PERCENT WITH 13-15 YRS	PERCENT WITH 16 YRS	PERCENT WITH >16 YRS
ALLEGANY	33	19	33	6	4	4
ANNE ARUNDEL	26	19	39	10	9	8
BALTIMORE	27	29	25	11	10	8
CALVERT	44	19	27	5	4	3
CAROLINE	43	28	19	4	3	3
CARROLL	42	24	20	6	4	4
CECIL	36	26	24	7	4	3
CHARLES	30	29	34	8	5	4
DORCHESTER	49	25	16	5	3	2
FREDERICK	36	23	23	6	6	7
GARRETT	49	13	26	3	2	2
HARFORD	27	19	26	10	9	9
HOWARD	23	17	23	19	14	14
KENT	42	25	19	6	5	6
MONTGOMERY	10	9	21	15	17	28
PRINCE GEORGE'S	16	17	31	14	10	13
QUEEN ANNE'S	46	25	18	4	3	3
ST. MARY'S	30	16	33	8	8	5
SOMERSET	50	29	14	3	1	2
TALBOT	36	27	16	8	6	7
WASHINGTON	33	21	30	7	5	4
WICOMICO	36	25	23	7	6	4
WORCESTER	44	25	18	7	4	2
BALTIMORE CITY	44	23	23	7	4	5

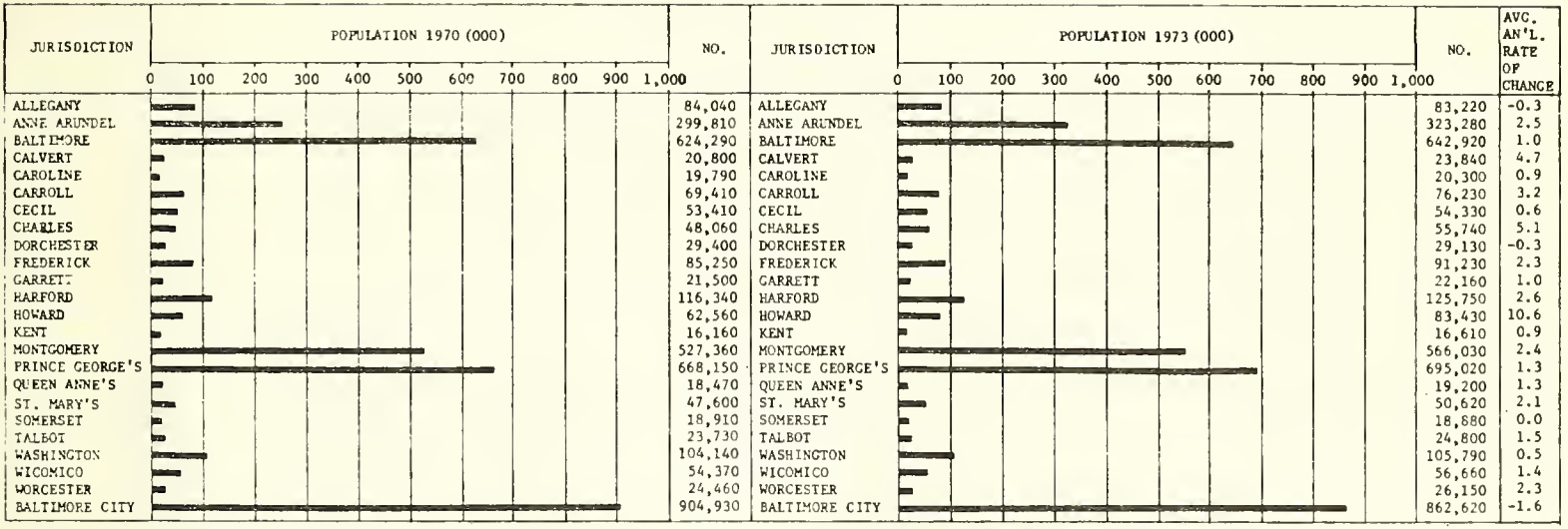
1970	EDUCATIONAL STATUS - FEMALES OVER 25					
JURISDICTION	PERCENT WITH LESS THAN 8 YRS	PERCENT WITH 9-11 YRS	PERCENT WITH 12 YRS	PERCENT WITH 13-15 YRS	PERCENT WITH 16 YRS	PERCENT WITH >16 YRS
ALLEGANY	30	29	37	8	4	2
ANNE ARUNDEL	24	22	37	10	6	2
BALTIMORE	25	22	35	9	6	3
CALVERT	36	23	29	8	4	2
CAROLINE	37	33	22	6	4	1
CARROLL	35	27	26	6	4	2
CECIL	28	27	33	7	3	2
CHARLES	25	24	40	6	3	2
DORCHESTER	38	32	19	6	3	1
FREDERICK	32	24	28	8	5	3
GARRETT	41	21	30	5	3	1
HARFORD	23	24	35	10	6	2
HOWARD	20	18	35	13	10	4
KENT	29	31	20	13	5	2
MONTGOMERY	10	11	37	19	15	8
PRINCE GEORGE'S	15	19	43	12	8	4
QUEEN ANNE'S	36	27	22	9	4	1
ST. MARY'S	24	22	37	10	6	2
SOMERSET	43	34	18	5	3	1
TALBOT	26	32	22	11	6	3
WASHINGTON	31	23	34	8	4	1
WICOMICO	30	20	25	9	5	2
WORCESTER	34	32	21	8	3	2
BALTIMORE CITY	40	25	23	6	3	2

Note: Rows may not add to 100 percent due to rounding.

Source: Based on U.S. Bureau of the Census, Census of Population, 1970, General Social and Economic Characteristics, Final Report PC(1)-C22, Maryland.

TABLE 7

POPULATION STATISTICS



JURISDICTION	POPULATION 1970 (000)	NO.	JURISDICTION	POPULATION 1973 (000)	NO.	AVG. AN'L. RATE OF CHANGE
ALLEGANY		84,040	ALLEGANY		83,220	-0.3
ANNE ARUNDEL		299,810	ANNE ARUNDEL		323,280	2.5
BALTIMORE		624,290	BALTIMORE		642,920	1.0
CALVERT		20,800	CALVERT		23,840	4.7
CAROLINE		19,790	CAROLINE		20,300	0.9
CARROLL		69,410	CARROLL		76,230	3.2
CECIL		53,410	CECIL		54,330	0.6
CHARLES		48,060	CHARLES		55,740	5.1
DORCHESTER		29,400	DORCHESTER		29,130	-0.3
FREDERICK		85,250	FREDERICK		91,230	2.3
GARRETT		21,500	GARRETT		22,160	1.0
HARFORD		116,340	HARFORD		125,750	2.6
HOWARD		62,560	HOWARD		83,430	10.6
KENT		16,160	KENT		16,610	0.9
MONTGOMERY		527,360	MONTGOMERY		566,030	2.4
PRINCE GEORGE'S		668,150	PRINCE GEORGE'S		695,020	1.3
QUEEN ANNE'S		18,470	QUEEN ANNE'S		19,200	1.3
ST. MARY'S		47,600	ST. MARY'S		50,620	2.1
SOMERSET		18,910	SOMERSET		18,880	0.0
TALBOT		23,730	TALBOT		24,800	1.5
WASHINGTON		104,140	WASHINGTON		105,790	0.5
WICOMICO		54,370	WICOMICO		56,660	1.4
WORCESTER		24,460	WORCESTER		26,150	2.3
BALTIMORE CITY		904,930	BALTIMORE CITY		862,620	-1.6

Source: Maryland State Department of Health and Mental Hygiene, Center for Health Statistics, Annual Vital Statistics Report, 1970 and 1973.

TABLE 8

AGE DISTRIBUTION STATISTICS
NONWHITE

1970	NONWHITE POPULATION AGE DISTRIBUTION				
JURISDICTION	PERCENT NONWHITE < 5	PERCENT NONWHITE 5-17	PERCENT NONWHITE 18-44	PERCENT NONWHITE 45-64	PERCENT NONWHITE >64
ALLEGANY	8	29	34	19	11
ANNE ARUNDEL	9	31	39	15	6
BALTIMORE	9	29	38	17	7
CALVERT	14	30	29	13	5
CAROLINE	11	31	30	20	9
CARROLL	7	26	40	19	10
CECIL	10	27	37	17	9
CHARLES	13	39	31	13	4
DORCHESTER	10	30	30	21	9
FREDERICK	11	31	34	16	7
GARRETT	14	71	14	***	***
HARFORD	11	33	40	14	6
HOWARD	9	33	40	16	6
KENT	9	29	33	19	10
MONTGOMERY	11	29	41	15	4
PRINCE GEORGE'S	13	31	44	10	3
QUEEN ANNE'S	8	28	32	20	11
ST. MARY'S	13	37	32	13	5
SOMERSET	10	31	31	19	10
TALBOT	9	27	30	22	12
WASHINGTON	6	24	56	11	6
WICOMICO	10	31	33	19	8
WORCESTER	10	34	30	18	8
BALTIMORE CITY	10	31	36	17	6

1973	NONWHITE POPULATION AGE DISTRIBUTION				
JURISDICTION	PERCENT NONWHITE < 5	PERCENT NONWHITE 5-17	PERCENT NONWHITE 18-44	PERCENT NONWHITE 45-64	PERCENT NONWHITE >64
ALLEGANY	11	23	37	16	12
ANNE ARUNDEL	9	30	39	15	7
BALTIMORE	9	26	41	17	7
CALVERT	11	37	33	13	6
CAROLINE	9	29	32	21	10
CARROLL	8	25	39	17	10
CECIL	10	27	37	17	9
CHARLES	11	39	32	13	5
DORCHESTER	10	29	32	21	10
FREDERICK	10	33	34	15	7
GARRETT	***	71	29	***	***
HARFORD	11	40	39	14	6
HOWARD	9	31	43	13	4
KENT	0	29	35	17	11
MONTGOMERY	11	27	45	13	3
PRINCE GEORGE'S	11	28	49	9	2
QUEEN ANNE'S	7	29	32	20	13
ST. MARY'S	11	37	33	13	5
SOMERSET	9	29	35	18	10
TALBOT	8	27	32	21	13
WASHINGTON	6	21	52	15	6
WICOMICO	10	30	33	19	9
WORCESTER	9	32	33	18	8
BALTIMORE CITY	10	30	37	17	6

***Less than 1 percent

Source: Maryland State Department of Health and Mental Hygiene, Center for Health Statistics, Annual Vital Statistics Report, 1970 and 1973.

TABLE 9

AGE DISTRIBUTION STATISTICS

WHITE

1970	WHITE POPULATION AGE DISTRIBUTION		
JURISDICTION	PERCENT 0-17	PERCENT 18-64	PERCENT >64
ALLEGANY	32	57	12
ANNE ARUNDEL	36	59	5
BALTIMORE	34	59	7
CALVERT	35	55	11
CAROLINE	32	54	14
CARROLL	33	57	10
CECIL	36	57	7
CHARLES	40	54	5
DORCHESTER	28	56	16
FREDERICK	34	57	9
GARRETT	37	52	12
HARFORD	38	57	5
HOWARD	38	56	6
KENT	31	55	14
MONTGOMERY	36	58	6
PRINCE GEORGE'S	36	60	4
QUEEN ANNE'S	33	55	12
ST. MARY'S	38	57	5
SOMERSET	28	56	16
TALBOT	30	56	15
WASHINGTON	34	57	10
WICOMICO	32	58	11
WORCESTER	30	55	15
BALTIMORE CITY	27	58	15

1973	WHITE POPULATION AGE DISTRIBUTION		
JURISDICTION	PERCENT 0-17	PERCENT 18-64	PERCENT >64
ALLEGANY	30	57	13
ANNE ARUNDEL	35	60	6
BALTIMORE	30	61	8
CALVERT	32	57	11
CAROLINE	33	53	14
CARROLL	33	57	10
CECIL	36	55	8
CHARLES	39	56	5
DORCHESTER	27	57	17
FREDERICK	33	57	9
GARRETT	37	51	12
HARFORD	37	58	6
HOWARD	35	60	5
KENT	30	57	14
MONTGOMERY	33	61	7
PRINCE GEORGE'S	32	63	5
QUEEN ANNE'S	31	57	12
ST. MARY'S	36	59	5
SOMERSET	27	56	17
TALBOT	28	56	16
WASHINGTON	32	57	11
WICOMICO	30	59	12
WORCESTER	27	59	14
BALTIMORE CITY	24	59	17

Source: Maryland State Department of Health and Mental Hygiene, Center for Health Statistics, Annual Vital Statistics Report, 1970 and 1973.

TABLE 10

PERCENT NONWHITE POPULATION

JURISDICTION	PERCENT NONWHITE 1970	PERCENT NONWHITE 1973
ALLEGANY	1	2
ANNE ARUNDEL	12	11
BALTIMORE	3	5
CALVERT	38	33
CAROLINE	20	20
CARROLL	4	4
CECIL	6	6
CHARLES	29	25
DORCHESTER	31	32
FREDERICK	7	7
GARRETT	***	***
HARFORD	9	9
HOWARD	9	11
KENT	25	24
MONTGOMERY	6	8
PRINCE GEORGE'S	15	23
QUEEN ANNE'S	24	22
ST. MARY'S	18	18
SOMERSET	38	38
TALBOT	24	23
WASHINGTON	4	4
WICOMICO	21	21
WORCESTER	33	31
BALTIMORE CITY	47	51

***Less than 1 percent

Source: Maryland State Department of Health and Mental Hygiene, Center for Health Statistics, Annual Vital Statistics Report, 1970 and 1973.

VII. PRESERVATION AND IMPROVEMENT OF HEALTH

INTRODUCTION

Preservation and improvement of health includes maintenance and improvement of the general level of health, maintenance of a healthful environment, and provision of the means, resources, and services necessary for health maintenance. Each of these was a major area of social concern for which indicators were postulated to monitor or reflect relative status. The indicators postulated were:

- health status - to indicate the population's state of personal health;
- mental health - to provide an added dimension to the general level of health and to reflect the relative status of the population with respect to levels of social stress and social conditions;
- environmental health - to address physical conditions which bear on, or are associated with, the population's general level of health; and
- health resources and services - to address availability and accessibility of health care.

Because of either a lack of sufficient data or inconclusive results during the analysis and development phase, it was not possible to construct reasonable indicators within the framework of this study for the mental health, environmental health, and health resources areas. However, because of the importance of health resources, a section based upon resource and utilization statistics has been included.

HEALTH STATUS

The statistics associated with this indicator are intended to portray the general level of health for Maryland residents. The statistics used rely heavily on vital statistics data since these data are collected annually and are recognized health indices. The components of the indicator are:

- incidence of influenza and pneumonia per 10,000 population;
- incidence of tuberculosis per 10,000 population;
- incidence of venereal disease per 10,000 population;
- death by suicide per 10,000 population;
- death by cancer per 10,000 population;
- death by lung cancer per 10,000 population;
- death by heart disease per 10,000 population;
- death by stroke per 10,000 population;
- death by accident per 10,000 population;
- death by cirrhosis of the liver per 10,000 population;
- birthrates by race per 10,000 population; and
- infant mortality rates by race per 10,000 population.

Morbidity rates indicate the incidence of disease and were therefore chosen for inclusion. While limited in their utility because of uncertain accuracy in reporting and diagnosis of illness, morbidity rates still provide an indicator of the status of the population's relative level of health.

Infant mortality rates are accepted public health measures which reflect the health status of both the child and the mother. Infant mortality rates bear upon the probability of a child's health development to maximum potential throughout adult life. Thus, the indicator not only reflects present health status but suggests levels and trends for future population health status.

The indicator implicitly incorporates a surrogate for the overall mortality rate. Of particular importance are heart disease, cancer, and stroke since these diseases are the leading causes of death. In addition, both cirrhosis of the liver, because of its association with consumption of alcohol, and suicide are included and are of interest not only as causes of death but as reflections of mental health.

Incidence of Health Resource Utilization

Because health status of the population cannot be adequately measured without attention to health care, statistics covering the area of health resources were included. Health resources depict the relative availability, accessibility, and utilization of manpower and facilities. The statistics presented are:

- number of hospital outpatient visits per 10,000 population;
- number of available general and long term care beds per 10,000 population;
- average length of stay at general and long term care hospitals; and
- physicians and general practitioners per 10,000 population.

Average length of stay, and the number of outpatient visits reflect utilization and suggest need or demand for health resources. The number of physicians and the number of beds reflect the availability of health services.

MENTAL HEALTH

The mental health indicator was intended to represent the ability to live a normal, well-adjusted, and productive life, and is concerned with the ability to cope with basic social stress. The mental health indicator was not calculated due to the unavailability of data at the county level and the lack of data reflecting the private health care sector. The components which were considered for this indicator include:

- divorce and separation rates, which suggest problems in family life that can have a detrimental effect on the mental health of the individuals involved;
- suicide rates, which can be considered an indicator of personal or social pressure;
- incidence of various other mental diseases, which suggests the levels of severity of mental health problems;
- admissions to mental health hospitals and clinics, which are a general indicator of the extent of mental illness and emotional problems, and the awareness of the illness by the population;
- drug addiction and alcoholism, which are both basic indicators of social and physical health problems; and
- mortality rate attributed to cirrhosis of the liver, which is a surrogate measure of alcoholism.

Environmental Health

The environmental health indicator was intended to reflect those aspects of the environment which may be hazardous to the public's health. This indicator was not calculated due to data limitations. For example, air quality data is collected for only the metropolitan Washington and Baltimore areas. The components considered for this indicator were air and water quality indicators, and work-related accident and injury rates. Levels

of exposure to contaminants in the air and water are indicators of a healthful environment and consequently bear upon long term physical health. Accident and injury rates and workmen's compensation are indicators of occupational safety and health.

HEALTH STATUS

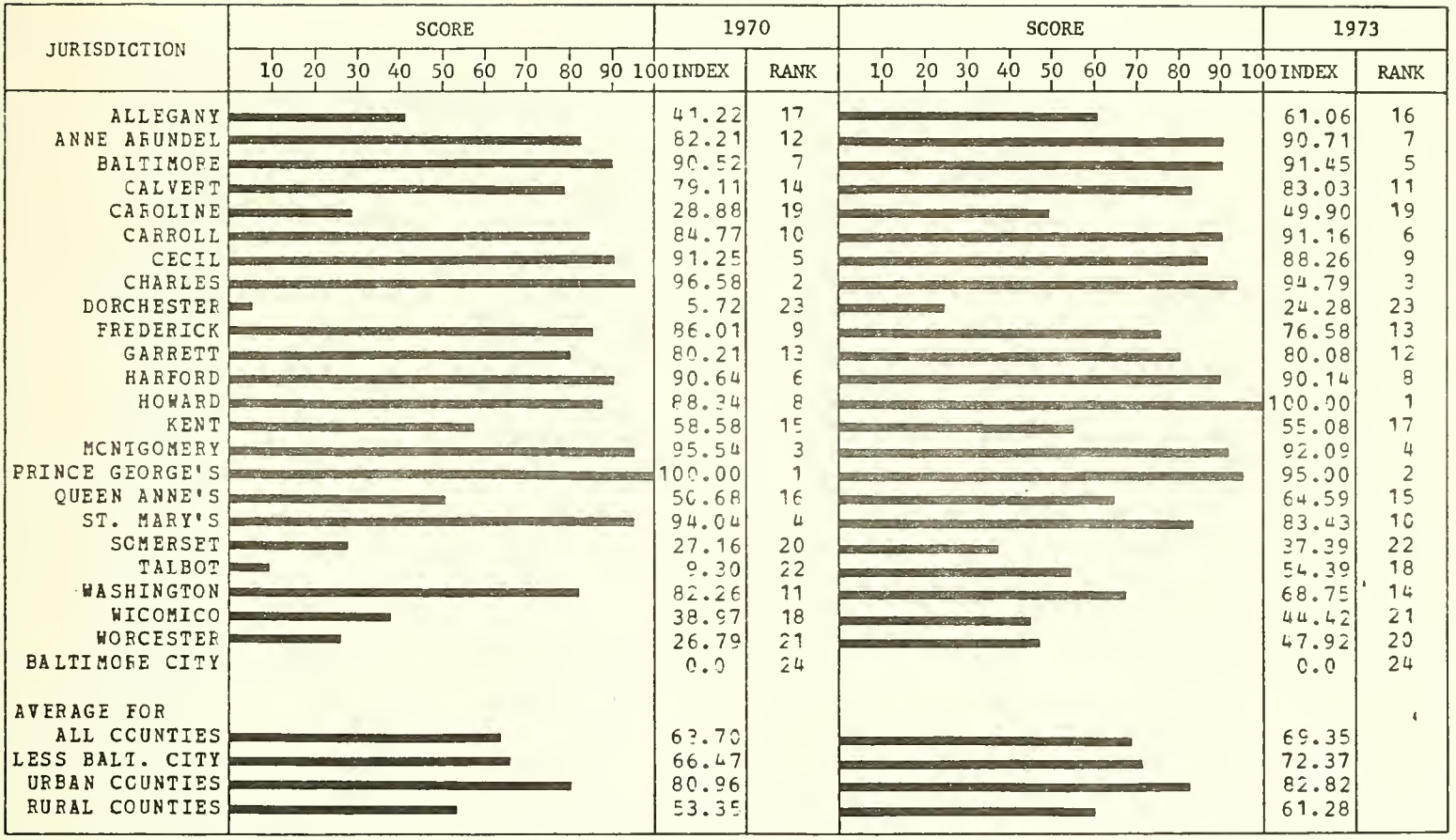
The health status indicator, presented in Table 11, was designed to reflect the general level of health of Maryland residents. The indicator provides a measure of the general level of health in terms of the rate and major causes of death (mortality rates per 10,000 population by major causes) and the incidence of major contagious diseases (morbidity rates per 10,000 population by major disease) with respect to that population's demographic and income characteristics. Within this framework, a county with a specific set of demographic, income, mortality, and morbidity characteristics will generate a unique indicator value reflecting that county's relative status with respect to the component statistics. Thus, the indicator provides for a particular population a measure of the general level of health as reflected by morbidity and mortality rates. These could, in turn, be related to the various social conditions present for that population (e.g., economic status, health resources).

In addition to the basic population and income statistics, the indicator is based upon 14 mortality and morbidity statistics shown in Table 12. The composite indicator shown in Table 13 is inversely related to the incidence of death by major cause and the incidence of contagious disease by type. Jurisdictions with high levels of low income, elderly population and non-white population also tend to have high mortality and morbidity rates. Because of the statistical relationship between these socioeconomic characteristics and mortality and morbidity rates, the indicator is sensitive not only to high levels of mortality and morbidity rates, but also to low income, elderly populations and non-white population, each of which serve to lower the indicator value. Consequently, the indicator value not only reflects the relative health status, but also the major demographic and income conditions statistically associated with general levels of health status.

The major causes of death and the major contagious disease which most influence the indicator are death by cancer, death by stroke, and the incidence of influenza. The demographic statistic which most influences the indicator is the proportion of the population aged 65 and older.

TABLE 11

HEALTH STATUS



JURISDICTION	SCORE 10 20 30 40 50 60 70 80 90 100	1970 INDEX	1970 RANK	SCORE 10 20 30 40 50 60 70 80 90 100	1973 INDEX	1973 RANK
ALLEGANY		41.22	17		61.06	16
ANNE ARUNDEL		82.21	12		90.71	7
BALTIMORE		90.52	7		91.45	5
CALVERT		79.11	14		83.03	11
CAROLINE		28.88	19		49.90	19
CARROLL		84.77	10		91.16	6
CECIL		91.25	5		88.26	9
CHARLES		96.58	2		94.79	3
DORCHESTER		5.72	23		24.28	23
FREDERICK		86.01	9		76.58	13
GARRETT		80.21	13		80.08	12
HARFORD		90.64	6		90.14	8
HOWARD		88.34	8		100.00	1
KENT		58.58	15		55.08	17
MONTGOMERY		95.54	3		92.09	4
PRINCE GEORGE'S		100.00	1		95.00	2
QUEEN ANNE'S		50.68	16		64.59	15
ST. MARY'S		94.04	4		83.43	10
SOMERSET		27.16	20		37.39	22
TALBOT		9.30	22		54.39	18
WASHINGTON		82.26	11		68.75	14
WICOMICO		38.97	18		44.42	21
WORCESTER		26.79	21		47.92	20
BALTIMORE CITY		0.0	24		0.0	24
AVERAGE FOR ALL COUNTIES		63.70			69.35	
LESS BALT. CITY		66.47			72.37	
URBAN COUNTIES		80.96			82.82	
RURAL COUNTIES		53.35			61.28	

Note: Indicator values have been scaled between 0 and 100 to provide a frame of reference.

TABLE 12

HEALTH STATISTICS

1970 JURISDICTION	DEATH BY SUICIDE & CIRRHOSIS: SUICIDE PER 10,000	DEATH BY CIRRHOSIS PER 10,000	1973 JURISDICTION	DEATH BY SUICIDE & CIRRHOSIS: SUICIDE PER 10,000	DEATH BY CIRRHOSIS PER 10,000
ALLEGANY	1.43	1.43	ALLEGANY	0.84	2.04
ANNE ARUNDEL	1.07	1.40	ANNE ARUNDEL	1.21	1.08
BALTIMORE	1.01	1.03	BALTIMORE	0.96	1.20
CALVERT	0.96	***	CALVERT	1.68	2.94
CAROLINE	2.53	2.02	CAROLINE	0.99	1.97
CARROLL	0.43	0.72	CARROLL	1.44	0.52
CECIL	2.06	1.69	CECIL	0.92	1.84
CHARLES	1.04	2.50	CHARLES	1.08	1.61
DORCHESTER	0.34	1.70	DORCHESTER	1.03	1.03
FREDERICK	1.17	1.06	FREDERICK	1.21	1.53
GARRETT	0.93	1.40	GARRETT	0.90	2.26
HARFORD	1.46	1.12	HARFORD	0.87	1.11
HOWARD	0.64	1.28	HOWARD	1.20	0.84
KENT	0.62	2.48	KENT	***	1.20
MONTGOMERY	1.16	0.91	MONTGOMERY	1.15	1.24
PRINCE GEORGE'S	0.94	1.48	PRINCE GEORGE'S	0.89	1.38
QUEEN ANNE'S	1.62	2.72	QUEEN ANNE'S	2.08	3.62
ST. MARY'S	0.63	1.47	ST. MARY'S	1.19	1.58
SOMERSET	***	1.59	SOMERSET	***	1.06
TALBOT	0.84	1.26	TALBOT	2.42	2.02
WASHINGTON	1.15	1.63	WASHINGTON	1.04	1.13
WICOMICO	1.84	0.92	WICOMICO	1.59	1.59
WORCESTER	2.86	2.45	WORCESTER	0.76	1.15
BALTIMORE CITY	1.13	3.97	BALTIMORE CITY	1.15	4.20

***Less than 1 percent

Source: Maryland State Department of Health and Mental Hygiene, Center for Health Statistics, Annual Vital Statistics Report, 1970 and 1973.

TABLE 12 (Con't.)

HEALTH STATISTICS

1970	INCIDENCE OF CONTAGIOUS DISEASE		
JURISDICTION	INFLUENZA PNEUMONIA PER 10,000	TB PER 10,000	VD PER 10,000
ALLEGANY	1.90	1.19	11.42
ANNE ARUNDEL	1.60	1.92	32.09
BALTIMORE	1.57	1.13	4.02
CALVERT	0.96	1.45	19.71
CAROLINE	3.54	5.06	45.48
CARROLL	2.59	1.45	8.64
CECIL	1.69	1.13	10.48
CHARLES	2.71	2.10	12.69
DORCHESTER	5.44	2.72	88.78
FREDERICK	1.99	1.30	8.45
GARRETT	1.86	***	1.40
HARFORD	1.38	0.87	15.90
HOWARD	1.76	1.62	9.91
KENT	2.48	3.72	27.85
MONTGOMERY	1.80	1.28	7.24
PRINCE GEORGE'S	1.39	1.26	11.99
QUEEN ANNE'S	3.25	1.09	27.61
ST. MARY'S	2.52	1.69	20.59
SOMERSET	8.99	3.17	42.83
TALBOT	5.90	1.29	85.12
WASHINGTON	2.21	1.45	13.15
WICOMICO	5.89	3.69	54.99
WORCESTER	8.19	5.32	53.14
BALTIMORE CITY	3.34	5.44	143.79

1973	INCIDENCE OF CONTAGIOUS DISEASE		
JURISDICTION	INFLUENZA PNEUMONIA PER 10,000	TB PER 10,000	VD PER 10,000
ALLEGANY	2.16	1.43	11.29
ANNE ARUNDEL	1.45	1.39	23.23
BALTIMORE	1.74	0.45	7.48
CALVERT	0.41	1.72	18.04
CAROLINE	1.97	4.52	40.88
CARROLL	1.44	0.92	6.69
CECIL	2.02	0.74	15.46
CHARLES	1.07	1.07	27.63
DORCHESTER	5.15	4.15	87.54
FREDERICK	1.64	1.12	20.93
GARRETT	0.90	0.46	1.35
HARFORD	1.67	0.63	18.05
HOWARD	1.31	0.85	9.82
KENT	2.41	4.82	30.10
MONTGOMERY	1.41	1.03	16.11
PRINCE GEORGE'S	0.93	1.57	26.19
QUEEN ANNE'S	3.12	2.09	23.95
ST. MARY'S	0.98	1.17	30.81
SOMERSET	4.23	1.07	48.72
TALBOT	2.82	2.04	60.08
WASHINGTON	3.50	0.95	17.29
WICOMICO	1.94	2.67	84.18
WORCESTER	1.14	2.43	66.92
BALTIMORE CITY	2.74	3.84	173.38

***Less than 1 percent

Source: Maryland State Department of Health and Mental Hygiene, Center for Health Statistics, Annual Vital Statistics Report, 1970 and 1973.

TABLE 13

HEALTH

1970	DEATH BY DISEASE AND ACCIDENT				
JURISDICTION	CANCER[1] PER 10,000 POP	LUNG CANCER PER 10,000 POP	HEART PER 10,000 POP	STROKE PER 10,000 POP	ACCIDENT PER 10,000 POP
ALLEGANY	16.30	4.16	60.45	10.06	5.95
ANNE ARUNDEL	10.01	3.14	24.05	4.77	4.74
BALTIMORE	11.65	3.80	40.68	4.89	3.19
CALVERT	12.02	2.83	22.60	7.69	9.13
CAROLINE	14.65	4.04	57.60	14.15	9.60
CARROLL	13.54	3.75	34.14	7.20	5.33
CECIL	11.42	2.06	35.29	4.68	6.74
CHARLES	3.95	3.33	24.38	3.33	4.58
DORCHESTER	17.69	6.00	55.78	11.90	11.95
FREDERICK	11.50	3.99	39.85	7.74	3.07
GARRETT	11.16	1.06	49.77	9.30	3.72
HARFORD	7.74	2.50	22.43	3.44	1.52
HOWARD	6.39	2.24	24.94	2.72	3.04
KENT	15.47	1.86	46.41	8.04	3.71
MONTGOMERY	10.35	2.28	21.60	5.80	3.38
PRINCE GEORGE'S	8.02	2.41	14.08	3.30	3.43
QUEEN ANNE'S	10.81	8.33	40.61	12.45	9.20
ST. MARY'S	7.56	1.47	21.01	6.51	7.77
SOMERSET	17.99	6.07	51.30	21.60	10.05
TALBOT	17.28	4.64	50.15	13.91	8.01
WASHINGTON	11.81	3.55	40.66	9.22	5.06
WICOMICO	15.45	5.52	41.38	16.37	8.83
WORCESTER	10.40	6.35	40.64	11.86	10.22
BALTIMORE CITY	16.50	6.04	49.09	8.88	5.18

1973	DEATH BY DISEASE AND ACCIDENT				
JURISDICTION	CANCER[1] PER 10,000 POP	LUNG CANCER PER 10,000 POP	HEART PER 10,000 POP	STROKE PER 10,000 POP	ACCIDENT PER 10,000 POP
ALLEGANY	17.90	5.17	59.24	9.73	6.37
ANNE ARUNDEL	10.20	3.13	22.33	4.10	4.05
ALTIMORE	12.35	4.03	33.38	5.85	3.41
CALVERT	11.52	4.61	31.46	8.39	7.55
CAROLINE	16.26	3.54	59.11	10.84	12.81
CARROLL	12.46	4.59	32.93	8.13	7.08
CECIL	10.12	4.42	31.23	5.15	4.05
CHARLES	7.53	1.97	10.48	2.33	7.00
DORCHESTER	17.05	5.03	54.43	10.53	6.52
FREDERICK	13.48	5.71	33.25	7.67	4.17
GARRETT	15.79	2.26	50.54	10.83	3.61
HARFORD	8.75	2.70	23.01	4.14	4.53
HOWARD	7.31	2.60	21.93	3.24	2.52
KENT	15.65	6.02	51.17	8.43	5.42
MONTGOMERY	10.80	2.70	22.12	5.39	2.04
PRINCE GEORGE'S	7.06	2.42	15.04	3.77	3.05
QUEEN ANNE'S	15.63	5.73	45.83	7.81	8.33
ST. MARY'S	7.70	2.17	19.95	5.53	7.11
SOMERSET	19.60	10.06	55.61	16.95	5.30
TALBOT	15.73	6.05	49.19	7.66	8.47
WASHINGTON	14.27	4.16	37.24	10.30	3.69
WICOMICO	16.59	5.12	44.43	16.81	8.23
WORCESTER	16.03	8.21	52.01	17.21	7.27
BALTIMORE CITY	10.53	6.02	40.58	9.13	8.78

[1] Excludes Lung Cancer

*** Less than 1 percent

Source: Maryland State Department of Health and Mental Hygiene, Center for Health Statistics, Annual Vital Statistics Report, 1970 and 1973.

TABLE 13 (Con't.)

HEALTH

1970	BIRTHS			
JURISDICTION	WHITE BIRTHS PER 10,000 POP	NONWHITE BIRTHS PER 10,000 POP	WHITE INF. DEATHS PER 1000 BIRTHS	NONWHITE INF DEATHS PER 1000 BIRTHS
ALLEGANY	15.90	18.50	20.50	90.90
ANNE ARUNDEL	16.80	18.70	16.20	19.80
BALTIMORE	14.50	20.80	13.40	21.70
CALVERT	18.70	24.80	24.70	30.90
CAROLINE	14.70	24.80	8.60	80.80
CARROLL	16.40	23.10	15.60	14.90
CECIL	20.10	24.80	12.90	13.00
CHARLES	20.00	27.80	10.20	31.30
DORCHESTER	11.70	24.50	25.30	49.10
FREDERICK	17.70	22.70	12.80	14.50
GARRETT	17.80	***	31.40	***
HARFORD	19.00	22.10	14.40	40.00
HOWARD	16.20	17.30	19.40	43.00
KENT	15.00	19.50	11.00	51.30
MONTGOMERY	15.00	25.00	14.20	20.20
PRINCE GEORGE'S	20.40	27.00	14.40	25.80
QUEEN ANNE'S	13.10	18.20	16.40	48.80
ST. MARY'S	26.40	24.80	19.50	18.60
SOMERSET	10.80	21.20	23.60	33.10
TALBOT	12.80	19.80	21.70	70.20
WASHINGTON	17.00	10.00	18.70	***
WICOMICO	14.40	23.20	19.50	33.50
WORCESTER	13.60	20.10	22.30	49.40
BALTIMORE CITY	14.10	21.80	21.20	29.20

1973	BIRTHS			
JURISDICTION	WHITE BIRTHS PER 10,000 POP	NONWHITE BIRTHS PER 10,000 POP	WHITE INF. DEATHS PER 1000 BIRTHS	NONWHITE INF DEATHS PER 1000 BIRTHS
ALLEGANY	11.80	19.70	17.60	37.00
ANNE ARUNDEL	13.80	16.90	11.90	19.30
BALTIMORE	10.40	19.80	10.90	8.70
CALVERT	15.10	18.20	4.20	34.70
CAROLINE	11.70	14.90	20.90	16.90
CARROLL	12.70	11.50	12.90	***
CECIL	16.30	19.90	19.10	16.70
CHARLES	16.10	18.40	10.90	19.20
DORCHESTER	9.40	16.00	21.30	40.80
FREDERICK	13.80	14.60	18.80	21.10
GARRETT	14.80	***	27.40	***
HARFORD	15.30	17.40	15.90	32.10
HOWARD	13.30	13.80	13.20	15.90
KENT	11.90	12.00	20.00	41.70
MONTGOMERY	10.70	18.20	8.90	23.10
PRINCE GEORGE'S	13.70	17.90	13.90	18.50
QUEEN ANNE'S	10.70	8.60	12.50	27.80
ST. MARY'S	18.40	19.60	15.60	45.20
SOMERSET	9.80	16.20	26.10	25.90
TALBOT	9.30	14.20	5.60	12.30
WASHINGTON	13.00	13.50	24.90	39.20
WICOMICO	11.80	19.30	13.40	8.50
WORCESTER	10.90	17.40	10.20	7.10
BALTIMORE CITY	10.30	17.00	18.70	22.40

SOURCE: Maryland State Department of Health and Mental Hygiene, Center for Health Statistics, Annual Vital Statistics Report, 1970 and 1973.

It should be pointed out that the component statistics are those provided through existing diagnostic and reporting systems. As a result, the statistics could easily be biased in terms of diagnosis given, differences of reporting between jurisdictions and unreported cases (e.g., cases never diagnosed such as influenza, and venereal disease). The indicator values, which are based upon the component statistics, reflect each of these possible areas of bias. Thus, caution should be exercised in interpretation of the statistics and indicator values.

The average indicator values for the State as a whole and the average indicator values for urban and rural areas have increased in value between 1970 and 1973. The major increase occurred in the rural counties. The upward trend in the indicator values suggests that mortality and morbidity rates have improved, income levels have improved and some changes may have occurred in the demographic mix within particular counties. Indirectly it can be hypothesized that changes in health service delivery and availability may have impacted specific areas and counties. One example (unsupported) could be the continuing impact of Medicare and Medicaid, particularly in counties or areas with high concentrations of the elderly and low income.

Geographically, the indicator shows that there is a substantial difference between rural areas and urban areas. In 1970, the rural areas have an average score almost 30 points lower than urban areas. However, in 1973 the difference in scores has narrowed to just over a 20 point difference.

The upward change in the average indicator value for rural counties between 1970 and 1973 can be attributed to a combination of income change and decreases in mortality and morbidity rates. Additional factors which may have contributed in a limited manner to the change in scores are changes in demographic mixes. These changes are a result of rural to urban migration patterns, particularly the migration of the non-white rural population to urban areas.

Finally, the differences between the urban and rural health status are consistent with the socioeconomic status scores shown in the beginning of this report. The rural counties generally have lower levels of educational attainment. The relative health status of the rural counties, as a whole, is parallel with their general socioeconomic status as well.

Regionally, the Eastern Shore counties generally have the lowest health status indicator values. The major factor contributing to the lower indicator scores for the Eastern Shore is the high incidence of cancer, lung cancer, and stroke, each of which increased between 1970 and 1973. Additional contributing factors depressing the Eastern Shore indicator values are: (1) the high proportion of elderly, particularly the non-white elderly, and (2) the high proportion of low income. The high proportion of elderly as a percent of total population might, in part, be explained by the rural to urban migration of the young and middle aged. As a result of this type of migration pattern, there has been a corresponding drop in the proportion of children and a drop in the birthrate. The Eastern Shore counties' relatively low indicator values for health status reflect not only higher than average mortality and morbidity rates but also reflect a set of population conditions that can be associated with low health status: an older, poorer population.

Howard County and Anne Arundel County shifted from rank numbers 8 and 12 respectively to rank numbers 1 and 7 respectively between 1970 and 1973. The upward shift in their indicator values and corresponding change in rank is a direct result of lower mortality and morbidity rates. The changes in mortality and morbidity rates can, in part, be associated with the rapid urbanization and growth occuring in these areas. The growth which has occurred in these counties has resulted in the in-migration of a younger more affluent population which is less susceptible to contagious disease and death. Correspondingly, the elderly population as a proportion of total population in these counties has decreased.

It should be pointed out that as indicator scores approach 100 the level of sensitivity decreases. Counties with high scores in both 1970 and 1973 may shift in rank. However, these shifts are not a result of major changes in health status but rather a result of minor variations in the component statistics. For this reason, particularly for scores at the higher end of the indicator, care should be exercised in interpretation of change in rank and relative health status.

HEALTH RESOURCES

Because health status of the population cannot be adequately measured without attention to health care, both health resources and health resource utilization must be examined. However, the development and analysis work on a health resource indicator did not result in a meaningful, statistically reasonable indicator. For this reason, the area of health resources is presented in terms of resource statistics without a composite indicator.

The statistics are presented in three categories: health facilities, health facility utilization, and manpower. The facility and resource statistics provide a measure of the supply capability available to a population. The utilization statistics provide a measure of demand for, and use of, the existing facilities and resources.

HEALTH RESOURCES FACILITIES

Health resource facilities are presented by county in Tables 14 and 15. However, because facilities are more reflective of service areas rather than county lines, care must be taken in their interpretation. For example, most of the population in Howard County is within reasonable proximity to both the City of Baltimore and Washington, D.C., facilities. As a result few facilities are actually located in Howard County but facility accessibility is not necessarily bad. Counties without statistics shown in the tables are those counties which use facilities within other jurisdictions.

Table 14, which represents total physicians and general practitioners per 10,000 population, shows that with the exception of Montgomery and Talbot Counties and the City of Baltimore, there are between 3 and 15 physicians per 10,000 population. Baltimore's large number of physicians per 10,000 can be explained by the presence of major hospital facilities in the city (e.g., Johns Hopkins, the University of Maryland, and many others). Montgomery County's large number of physicians can be accounted for by federal facilities (e.g., National Institutes of Health) and its proximity to Washington, D.C. The large number of physicians located in Talbot County might be explained by the desirability of Talbot as a place of residence, even though actual practices may be located in surrounding counties.

TABLE 14

HEALTH RESOURCES

Jurisdiction	1970		1973	
	Physicians per 10,000[1]	General Practitioners per 10,000 [1]	Physicians per 10,000[1]	General Practitioners per 10,000 [1]
Allegany	11.4	1.3	12.7	0.7
Anne Arundel	8.3	1.8	8.8	1.2
Baltimore	6.3	0.6	7.4	0.6
Calvert	4.3	2.4	4.2	2.5
Caroline	3.0	2.0	3.0	2.0
Carroll	11.5	2.9	9.3	2.0
Cecil	5.1	3.0	8.7	2.9
Charles	3.5	1.7	4.5	1.6
Dorchester	15.3	2.7	16.1	3.8
Frederick	8.5	2.6	8.7	2.1
Garrett	3.3	1.9	5.0	1.8
Harford	4.0	2.2	9.5	1.9
Howard	11.2	1.6	20.0	1.3
Kent	11.1	5.0	11.4	3.6
Montgomery	23.4	2.1	31.4	2.2
Prince George's	6.7	1.2	7.1	1.2
Queen Anne's	3.8	2.2	3.7	2.1
St. Mary's	5.7	2.3	6.5	1.6
Somerset	5.8	5.8	4.2	4.2
Talbot	23.2	3.0	29.0	2.4
Washington	11.2	2.7	11.2	2.2
Wicomico	16.6	2.4	19.4	4.9
Worcester	6.1	5.3	6.1	4.2
Baltimore City	43.3	2.7	34.5	2.4

SOURCE: 1) American Medical Association, Listing of Physicians, 1970 & 1973.

HOSPITAL RESOURCES

JURISDICTION	GENERAL HOSPITAL BEDS PER 10,000 POPULATION 1970	1973
Allegany	71.30	73.43
Anne Arundel	11.77	13.08
Baltimore	18.67	20.86
Calvert	37.50	32.77
Caroline	[1]	[1]
Carroll	17.87	16.27
Cecil	20.78	31.67
Charles	11.64	10.05
Dorchester	24.49	34.36
Frederick	23.09	21.60
Garrett	25.11	32.43
Harford	15.91	23.73
Howard	[2]	7.07
Kent	49.38	48.19
Montgomery	19.04	21.47
Prince George's	8.32	9.01
Queen Anne's	[1]	[1]
St. Mary's	15.76	16.40
Somerset	19.04	20.74
Talbot	65.82	82.25
Washington	35.64	35.07
Wicomico	60.41	57.84
Worcester	[1]	[1]
Baltimore City	63.63	71.77

[1] The following county pairs are served by the same facilities: (1) Kent and Queen Anne's, (2) Caroline and Talbot, and (3) Wicomico and Worcester.

[2] Howard County reported no hospital beds in 1970.

Source: Medical Facilities Survey and Plan, 1972 and 1975, State of Maryland, Department of Health and Mental Hygiene.

In terms of general practitioners, most of the counties range between 1 and 3 per 10,000 population with the exception of Kent, Somerset, and Worcester Counties, which have approximately 5 general practitioners per 10,000. The only clear difference between these counties and the other counties is the fact that the general practitioners represent a higher proportion of the total physicians.

In terms of total physicians, most of the counties have increased in the number of physicians per 10,000. However, in terms of general practitioners most of the counties have either remained the same or have decreased in the number of general practitioners per 10,000 between 1970 and 1973. The one major exception is Worcester County which increased from 2.4 general practitioners per 10,000 in 1970 to 4.9 general practitioners per 10,000 in 1973. Generally speaking, the number of physicians per 10,000, particularly general practitioners, appears to be mostly a function of population size or special institutional requirements.

Excepting the City of Baltimore, the highest number of hospital beds per 10,000 population appears to be in the rural counties with lower levels of population. With very few exceptions the number of hospital beds per 10,000 population has increased between 1970 and 1973.

The increases in both physicians per 10,000 population and hospital beds per 10,000 population between 1970 and 1973 is consistent with and parallel to the overall increase in the health status indicator, particularly with respect to the rural counties. Thus, it may be possible that the increased physical and human resources available in the rural counties has impacted the overall change in relative health status.

RESOURCE UTILIZATION

As shown in Table 16, with only a few exceptions, the number of outpatients per 10,000 population in each county has increased between 1970 and 1973. Most of the counties range between 2,000 and 6,000 outpatients per 10,000, but there are the following exceptions: Allegany, Dorchester, Garrett, Kent, Talbot, Wicomico, and the City of Baltimore. In each case, these are either shared facilities or facilities used extensively by patients outside the boundaries of the jurisdictions in which the facility is located.

The average length of stay in general hospitals appears to be between 5 and 9 days, as shown in Table 16. There do not appear to be any major exceptions nor does there appear to be any significant increase or decrease between 1970 and 1973. However, in terms of long-term stay, the average stay appears to have increased between 1970 and 1973. In addition, four counties have much longer average lengths of stay in 1973 relative to the rest of the State: Calvert, Cecil, Somerset, and Worcester Counties.

TABLE 16

HOSPITALIZATION RESOURCES

Jurisdiction	Out Patients Visits Per 10,000		Average Length of Stay: General Hospital (in days)		Average Length of Stay: Long-Term Care Hospital (in days)	
	1970	1973	1970	1973	1970	1973
Allegany	8,313	13,660	9.4	8.4	125.0	188.0
Anne Arundel	4,573	4,330	7.0	6.8	144.0	177.0
Baltimore	3,634	5,187	9.0	7.8	123.2	178.0
Calvert	7,115	6,675	6.1	5.9	130.0	240.0
Caroline	3,050	4,016	[2]	[2]	[4]	207.0
Carroll	4,174	3,440	6.5	6.5	191.0	138.0
Cecil	4,175	5,433	6.5	6.0	212.0	238.0
Charles	2,923	4,416	5.6	4.8	[2]	[2]
Dorchester	10,339	14,016	7.8	7.3	239.0	157.0
Frederick	2,986	6,251	6.9	5.8	120.0	170.0
Garrett	6,440	11,750	7.9	7.9	280.0	219.0
Harford	3,092	4,730	6.7	6.9	196.0	156.0
Howard	1,004	2,612	[3]	5.9	[3]	[3]
Kent	14,743	14,406	8.3	7.3	261.0	199.0
Montgomery	3,715	4,593	6.4	6.7	150.0	175.0
Prince George's	2,176	2,060[1]	7.2	8.2	147.0	180.0
Queen Anne's	3,034	3,638	[2]	[2]	[4]	96.5
St. Mary's	6,108	4,275	5.1	5.7	153.0	154.0
Somerset	5,696	7,700	7.8	5.9	184.0	225.0
Talbot	9,161	27,420	6.4	6.9	170.0	87.7
Washington	5,170	6,186	8.2	7.4	209.0	198.0
Wicomico	11,050	15,783	6.7	6.8	114.0	149.0
Worcester	2,024	5,545	[2]	[2]	[4]	268.0
Baltimore City	19,665	20,589	9.0	9.2	[4]	195.0

[1] Data not available from Prince George's County Health Department.

[2] The following county pairs are served by the same general hospital facilities: (1) Kent and Queen Anne's Counties, (2) Caroline and Talbot, and (3) Wicomico and Worcester.

[3] No facilities.

[4] The following jurisdictions have the same long-term average length of stay in 1970: (1) Kent and Queen Anne's, (2) Caroline and Talbot, (3) Wicomico and Worcester, and (4) Baltimore County and Baltimore City.

Source: Medical Facilities Survey and Plan, 1972 and 1975, State of Maryland, Department of Health and Mental Hygiene.

VIII. PROMOTION OF PUBLIC SAFETY AND JUSTICE

INTRODUCTION

The activity sector of public safety and justice reflects the status of population safety, the administration of justice and the correctional process. Conceptually, this area is based on principles of the law, social and behavioral science, and public administration. Three areas of concern have been identified: public safety, justice, and offender rehabilitation. Public safety is concerned with violence or disruption from natural or human causes that impacts upon the population. Justice is viewed as the ability to redress criminal and civil wrongs against an individual fairly and expeditiously. Offender rehabilitation is concerned with the treatment of persons who are adjudicated and committed to the custody or control of the State.

Comparisons among the three public safety and justice indicator areas are difficult due to differences in the data base used. Public safety data are characteristically measures of incidence and not population. These data record events such as crimes, fires, etc. Justice data record cases rather than individual defendents; offender rehabilitation data are population based but do not currently provide individual offender identification or status information. In addition, major categories of social statistics within this activity sector were unavailable. Public safety and justice data are further complicated by incompatible geographic units, different reporting periods, confidentiality restrictions, and double counting of interjurisdictional events.

PUBLIC SAFETY

The public safety indicator was designed to reflect the population's freedom from violence or disruption to individuals and property. The area of concern also focuses on preservation of public peace, detection and prevention of crime, protection of property, and the arrrest of criminals. This area normally is an individual's first point of contact with the public safety and justice system.

The public safety indicator measures violence to an individual and his property. The indicator is comprised of three statistics: per capita violent crime; per capita property crime; and per capita fatal traffic accidents. As a result, the public safety indicator does not include all facets of public activity due to data limitations. Examples of additional social statistics which were unavailable at the county level for 1970 and 1973 are fire and rescue statistics, victimization data, part II UCR* crime statistics, numbers of uniformed police, and natural disaster statistics.

In addition, crime statistics are generally believed to be understated, since they only represent those crimes which were reported to the police and not the actual number of crimes committed.

JUSTICE

The justice area of concern addresses the legal rights of all persons to have expeditious and fair hearings in all criminal and civil matters. The principal functions reflected in this indicator are: courts, prosecution, defense, and the juvenile justice system. It was hoped that a justice indicator could be developed to measure justice activity levels and the type of justice received (i.e., whether a defendant received a speedy trial). Unfortunately, the social statistics which are currently available to measure justice do not adequately address these purposes. The social statistics which were used in an attempt to construct a justice indicator were: total district and circuit court cases per 10,000 population; trial court cases per 10,000 population; court cases per judge; percentage of juvenile cases dropped; percentage of juvenile cases informally disposed of; median age of criminal court cases; percentage of circuit court cases terminated; juvenile court cases per 10,000 juveniles; criminal court cases per 10,000 population. The statistical results obtained using these variables were found to be inconclusive and difficult to interpret. Difficulties were encountered because the Office of Public Defender did not exist in the 1970 base year and the statewide prosecution statistics were unavailable due to the fact that prosecution is a local function. The justice indicator was further complicated by reorganization of the judiciary to establish the District Court system and subsequent jurisdictional changes that resulted in data incompatabilities for the 1970-1973 period.

*Uniform Crime Reports.

OFFENDER REHABILITATION

Offender rehabilitation reflects the treatment of persons who have been convicted of crimes and are referred to the State's adult corrections and juvenile services systems. This indicator would reflect the extent to which society is protected from repeated crimes by convicted offenders through their rehabilitation, isolation from, or reintegration into the community. The major activities included within this indicator are detention, corrections, treatment of defective delinquents, probation, parole, and juvenile services. For the most part, offender rehabiliation is a State function. Facilities and programs in this area provide services on a statewide or regional basis resulting in little data collection on a county basis. The lack of statistics at the county level therefore precludes construction of an indicator for offender rehabilitation at this time.

Currently, only intake rates and case dispositions in the juvenile services area and local jail statistics for adults are available annually at the county level. The county level social statistics necessary for the construction of an indicator for offender rehabilitation include: incarceration and commitment rates for adult and juvenile offenders, numbers of adult and juvenile probation cases per 10,000 population, numbers of adult parole and juvenile after care cases per 10,000, average length of stay, and recidivism rates for adult offenders and re-referral for juveniles.

PUBLIC SAFETY

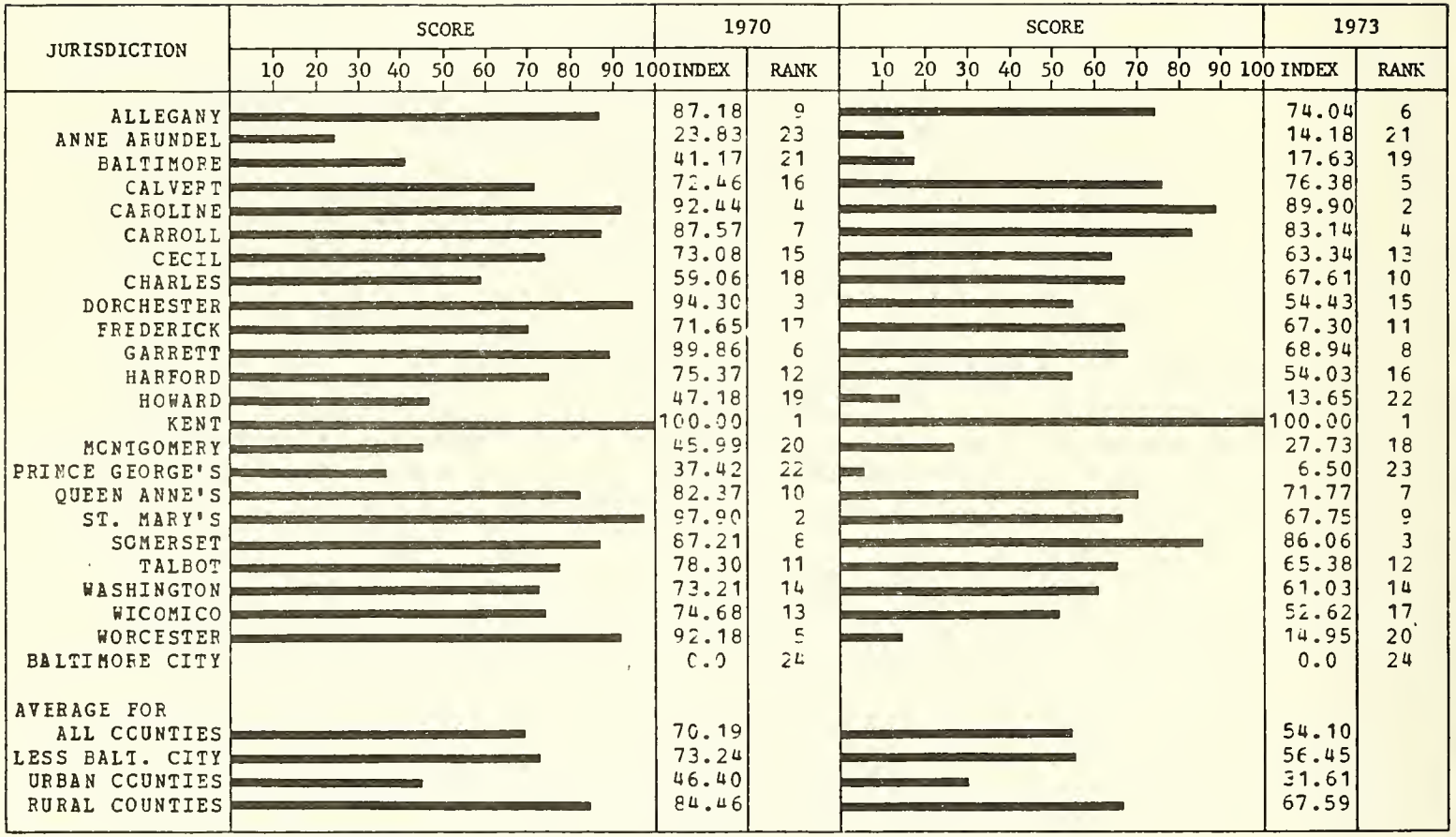
The social statistics and the indicator for public safety are built on avaiable statistics which measure the amount of violence which occurs to an individual, his property, and his family. The social statistics included in this indicator are: (1) violent crime, (2) property crime, and (3) fatal traffic accidents per capita. The violent crimes of murder, rape, assault, and robbery measure the exposure of the population to criminal acts against their persons. In the same manner, the property crimes of breaking and entering, larceny, and auto theft reflect the exposure of the population to criminal acts against their possessions. Crime is considered to be under-reported but still serves as an indicator of a major social problem that encompasses all strata of society. Noncriminal violence is reflected by the number of fatal traffic accidents. The public safety indicator also includes social statistics which measure the income distribution of the population and the age/racial mix of the population.

Counties which have high levels of property and violent crime, in terms of the indicator, rank as more violent than counties which have lower crime rates. The urban counties, in terms of the public safety indicator, were shown to be subject to more violence than the rural counties (see Table 17). The urban counties, in general, also had higher rates for violent and property crimes (see Table 18). Fatal traffic accidents, on the other hand, were generally lower for the urban areas than for the rural areas. A general regional pattern of safety in terms of the indicator occurs with the following grouping of regions from least violent to most violent: Eastern Shore; Western Maryland; Southern Maryland; the Baltimore SMSA (excluding the City of Baltimore); the Washington urban area and the City of Baltimore. The City of Baltimore was ranked most violent in 1970 and 1973 because it had the highest violent and property crime rates during this period.

TABLE 17

PUBLIC SAFETY

INDICATORS



JURISDICTION	1970 INDEX	1970 RANK	1973 INDEX	1973 RANK
ALLEGANY	87.18	9	74.04	6
ANNE ARUNDEL	23.83	23	14.18	21
BALTIMORE	41.17	21	17.63	19
CALVERT	72.46	16	76.38	5
CAROLINE	92.44	4	89.90	2
CARROLL	87.57	7	83.14	4
CECIL	73.08	15	63.34	13
CHARLES	59.06	18	67.61	10
DORCHESTER	94.30	3	54.43	15
FREDERICK	71.65	17	67.30	11
GARRETT	89.86	6	68.94	8
HARFORD	75.37	12	54.03	16
HOWARD	47.18	19	13.65	22
KENT	100.00	1	100.00	1
MONTGOMERY	45.99	20	27.73	18
PRINCE GEORGE'S	37.42	22	6.50	23
QUEEN ANNE'S	82.37	10	71.77	7
ST. MARY'S	97.90	2	67.75	9
SOMERSET	87.21	8	86.06	3
TALBOT	78.30	11	65.38	12
WASHINGTON	73.21	14	61.03	14
WICOMICO	74.68	13	52.62	17
WORCESTER	92.18	5	14.95	20
BALTIMORE CITY	0.0	24	0.0	24
AVERAGE FOR ALL COUNTIES	70.19		54.10	
LESS BALT. CITY	73.24		56.45	
URBAN COUNTIES	46.40		31.61	
RURAL COUNTIES	84.46		67.59	

Note: Indicator values have been scaled between 0 and 100 to provide a frame of reference.

TABLE 18

PUBLIC SAFETY

1970	PUBLIC SAFETY		
JURISDICTION	FATAL ACCIDENTS PER 10,000	VIOLENT CRIME PER 10,000	PROPERTY CRIME PER 10,000
ALLEGANY	2.62	2.74	65.92
ANNE ARUNDEL	2.33	22.08	297.39
BALTIMORE	1.35	16.61	232.97
CALVERT	2.88	4.81	118.75
CAROLINE	2.53	4.04	48.51
CARROLL	2.16	2.59	63.68
CECIL	4.12	14.98	122.45
CHARLES	3.54	18.52	172.70
DORCHESTER	3.74	34.01	58.16
FREDERICK	2.93	9.15	123.64
GARRETT	2.79	1.40	56.74
HARFORD	1.89	13.07	111.23
HOWARD	4.32	23.98	217.07
KENT	3.09	3.09	21.66
MONTGOMERY	1.21	11.11	212.45
PRINCE GEORGE'S	1.66	31.30	253.75
QUEEN ANNE'S	6.50	4.87	86.63
ST. MARY'S	3.36	2.31	28.15
SOMERSET	5.82	25.38	80.38
TALBOT	4.21	16.43	105.35
WASHINGTON	3.07	16.04	121.76
WICOMICO	2.21	9.01	112.75
WORCESTER	4.09	8.59	52.74
BALTIMORE CITY	1.14	208.97	477.83

1973	PUBLIC SAFETY		
JURISDICTION	FATAL ACCIDENTS PER 10,000	VIOLENT CRIME PER 10,000	PROPERTY CRIME PER 10,000
ALLEGANY	3.73	9.49	171.71
ANNE ARUNDEL	1.98	56.21	448.34
BALTIMORE	1.63	20.42	415.21
CALVERT	2.94	13.42	163.17
CAROLINE	5.42	24.14	113.30
CARROLL	5.51	14.95	136.43
CECIL	2.21	36.26	229.71
CHARLES	4.84	24.04	206.49
DORCHESTER	2.75	131.48	317.89
FREDERICK	2.08	21.70	205.31
GARRETT	0.45	27.98	201.71
HARFORD	2.94	43.82	273.16
HOWARD	1.56	40.99	442.17
KENT	2.41	42.14	77.66
MONTGOMERY	1.52	17.91	370.39
PRINCE GEORGE'S	1.80	51.09	478.27
QUEEN ANNE'S	4.17	18.23	186.46
ST. MARY'S	4.94	44.25	216.91
SOMERSET	1.59	36.02	134.00
TALBOT	4.84	18.95	214.52
WASHINGTON	1.61	17.11	229.32
WICOMICO	2.65	45.18	280.62
WORCESTER	4.21	65.39	452.77
BALTIMORE CITY	2.04	183.23	575.49

Sources: 1) Maryland State Highway Administration, Bureau of Accident Statistics, Traffic Accident Summary, 1970 and 1973.
2) Maryland Department of Health and Mental Hygiene, Center for Health Statistics, Annual Vital Statistics Report, 1970 and June 1973.
3) Maryland Governor's Commission on Law Enforcement and the Administration of Justice, Comprehensive Plan, 1972 and 1975.

Kent County, in terms of the indicator, ranked as the least violent county in Maryland in both 1970 and 1973. Other Eastern Shore counties also were generally, prominent among the five least violent counties in 1970 and 1973. Worcester County, however, was a notable exception within this region. A dramatic downward shift occurred in its public safety ranking from fifth place in 1970 to twentieth place in 1973. This increase in measurable violence was attributed to a sharp escalation in violent and property crime rates in this time period. It was postulated that the large seasonal population of Ocean City, which is not included in calculating the per capita crime rates, resulted in Worcester County's crime rate being overstated. Calvert County's shift from sixteenth position in 1970 to fifth position in 1973 can be attributed to relatively low rates of fatal accidents and crimes, as compared with other Maryland counties in 1973.

In analyzing the social indicator for public safety, the social variable of higer income (i.e., greater than $10,000 in 1970 dollars) was found to move in the same direction as property crime. This suggests that the property crimes of burglary, larceny, and auto theft are associated with higher income groups. Violent crime and fatal accidents were found to be more associated with lower income levels (i.e., less than $10,000 in 1970 dollars) and with the elderly. This supports the widely held belief that violent crime is heaviest in its impact on the poor and the elderly.

Between 1970 and 1973, there has been a major decrease in the indicator values for the urban and rural counties. The lower overall values are directly attributable to the major increases in both violent and property crime rates per 10,000 population. The drop in indicator values was approximately the same for both the urban and rural counties, i. e., 14.0 and 16. 9 points respectively.

Table 19 depicts property and violent crime by type for the State of Maryland for the 1970-1973 period. All crime types with the exception of robbery have increased from 1970-1973. The highest increase is larceny/theft with an increase of 129 percent. It should be noted, however, that the increase is due, in part, to an increased awareness of the public in reporting crime, more effective police protection, and improvements in public safety crime reporting procedures.

TABLE 19

PROPERTY AND VIOLENT CRIME BY TYPE
FOR THE STATE OF MARYLAND

PROPERTY AND VIOLENT CRIME	YEAR	
	1970	1973
Murder and Non-Negligent Manslaughter	377 (9.35)	459 (11.7)
Forcible Rape	954 (23.7)	1,119 (28.5)
Robbery	13,308 (329.9)	12,207 (311.2)
Aggravated Assault	10,149 (251.7)	12,909 (329.1)
Burglary	41,686 (1,033.6)	46,422 (1,183.5)
Larceny/Theft	44,772 (1,110.2)	99,921 (2,547.4)
Auto Theft	21,464 (532.2)	22,122 (564.0)

Source: Maryland Governor's Commission on Law Enforcement and the Administration of Justice, Comprehensive Plan, 1972-1975.

*Values in parentheses are per 10,000.

IX. ADVANCEMENT OF ECONOMIC WELL-BEING

INTRODUCTION

A universal economic goal is to provide each person with the opportunity for a reasonable standard of living. Indicators were initially proposed for the following three areas of economic well-being: employment, income sufficiency/affluence, and business activity. The first indicator, employment, reflects the concern that there be sufficient employment opportunities available for those actively seeking work. Income sufficiency/affluence reflects the concern that incomes be sufficiently high to provide an adequate life style. Business activity reflects the ability of the business and commercial sectors to provide opportunities for jobs and income.

As a result of the analysis, indicators were developed for the employment and income sufficiency/affluence areas. The business activity indicator was not developed since the required data were not always available at the county level.

EMPLOYMENT

The employment indicator was designed to reflect the availability or lack of availability of employment opportunities by place of work for counties in Maryland. The social statistics in the indicator were selected to reflect a particular population status with respect to labor force participation, unemployment and duration of unemployment. The socioeconomic variables which measure income distribution and the age/sex mix of the population were also included in the employment indicator. The relationship between these statistics is basic; more complex relationships (e. g., income and unemployment by race and sex) were not tested due to data limitations.

INCOME SUFFICIENCY/AFFLUENCE

The income sufficiency/affluence indicator was designed to reflect the economic well-being of a population in terms of the ability to purchase goods and services. The indicator combines demography, income, expenditure, and per capita public assistance measures to reflect economic well-being. Ideally, the indicator should include social statistics by type of expenditures (i.e., food, clothing, education) but these data are not available.

Public assistance cases were postulated to reflect the level of income sufficiency. A high proportion of public assistance cases was believed to be related to low income levels and low per capita expenditures. On the other hand, a low proportion of public assistance cases was believed to be related to high income levels and high per capita expenditures.

BUSINESS ACTIVITY

This indicator was designed to reflect the economic environment in which the population achieves economic well-being. The status of the economic environment provides the likely level of economic opportunity and thus the potential for achieving a particular level of economic well-being. The statistics selected for this indicator included employment by industry, employment per establishment, aggregate payroll, bankruptcy, value of shipments, per capita tax base, and public expenditures per capita. Employment by industry, employment per establishment, payroll, bankruptcy, and value of shipments are direct measures of economic strength and wealth, and provide an indicator of the level of economic opportunity. In addition, at the State level, it would have been possible to include gross State product. This indicator was not calculated due to lack of data at the county level for the 1970 and 1973 period.

EMPLOYMENT INDICATOR

The employment indicator is intended to represent the relative status of employment for Maryland residents at the county level. The specific statistics in the employment indicator focus on labor force participation rate, unemployment rate, duration of unemployment, average unemployment benefits, percentage of persons unemployed, income distribution of the population, and age/race characteristics. Labor force participation reflects the proportion of the population eligible for and involved in active work or seeking work. Conversely, unemployment describes the lack of opportunity for work, and duration of unemployment indicates the extent of the impact of the lack of employment opportunities and the demand for work. Duration of unemployment characterizes the magnitude and the subsequent hardship attributable to unemployment.

The average unemployment benefit is a measure of the compensation which the worker receives as an offset to the income lost through unemployment. The income distribution and the age/race composition of the population reflect the characteristics of the employed/unemployed population.

The composite indicator of employment is most significantly impacted by the social statistics which measure the income distribution of the population and the unemployment rate. The social statistics which measure the proportion of the population with incomes less than $9,000 and unemployment rates are strongly related to each other and inversely related to the social statistics which measure the proportion of the population with incomes greater than $9,900. These relationships are indicative of the high correlation between low incomes, unemployment rates, and average length of unemployment. In addition, the percentage of the population in low income levels is very slightly related to the percent of the non-white population.

A high rank on the employment index (see Table 20) is indicative of a high number of employment opportunities and a low unemployment rate. Conversely, a low ranking on the employment indicator implies a lower level of employment opportunities and higher unemployment rates.

The urban counties have a higher rank on the employment indicator than the rural counties, reflecting the employment opportunities available in more urbanized areas. Montgomery and Prince George's Counties ranked first and third respectively in 1970 and 1973 on the employment indicator which is due in large part to the stabilizing influence the Federal Government has on the employment market in these areas. The City of Baltimore ranked fourteenth in 1970 and sixteenth in 1973 which placed it below the average for all jurisdictions in both years. Baltimore's ranking can be explained by its relatively high unemployment rate and high proportions of families in low income groups. Although the rural counties have lower scores on the employment indicator, their overall impact on the State is not as great because the population and labor force of these counties is relatively small.

The indicator also provides insight into the rural to urban shift which has taken place in this country. The urban/suburban areas which have employment opportunities draw persons from the rural areas. The best example of the rural to urban shift affecting employment is the movement of Charles County from ninth in 1970 to fifth in 1973. Charles County is becoming more urbanized and was included in the Washington, D.C. SMSA in 1973. On the other hand, the Eastern Shore counties had the lowest scores on the employment indicator in 1970 and 1973, signifying high unemployment rates, few job opportunities, and corresponding income penalties. Western Maryland counties rank higher than the Eastern Shore counties, but rank lower than the urban counties.

Between 1970 and 1973 there has been almost no change in the combined urban and rural county indicator scores which suggests little relative change in the overall employment status. However, based upon the component statistics shown in Table 21, the overall employment status dropped in terms of levels of unemployment and exhausted benefits. This decline in employment levels was offset in the indicator by increased income levels over the same period.

TABLE 20

EMPLOYMENT INDICATORS

JURISDICTION	SCORE (10 20 30 40 50 60 70 80 90 100)	1970 INDEX	1970 RANK	SCORE (10 20 30 40 50 60 70 80 90 100)	1973 INDEX	1973 RANK
ALLEGANY		44.72	16		52.13	14
ANNE ARUNDEL		79.07	5		84.52	4
BALTIMORE		83.88	4		83.27	6
CALVERT		45.11	15		61.75	10
CAROLINE		24.73	21		15.65	23
CARROLL		76.43	6		82.30	7
CECIL		54.29	11		57.15	11
CHARLES		61.40	9		84.33	5
DORCHESTER		17.48	23		16.15	22
FREDERICK		62.76	8		69.95	8
GARRETT		27.87	19		34.06	17
HARFORD		75.97	7		55.22	12
HOWARD		87.58	2		91.32	2
KENT		25.01	20		24.00	19
MONTGOMERY		100.00	1		100.00	1
PRINCE GEORGE'S		87.47	3		86.05	3
QUEEN ANNE'S		29.26	18		19.18	20
ST. MARY'S		46.87	13		54.91	13
SOMERSET		0.00	24		0.00	24
TALBOT		35.86	17		28.29	18
WASHINGTON		60.02	10		63.04	9
WICOMICO		47.18	12		47.91	15
WORCESTER		20.34	22		18.47	21
BALTIMORE CITY		45.46	14		44.89	16
AVERAGE FOR ALL COUNTIES		51.62			53.11	
LESS BALT. CITY		51.88			53.46	
URBAN COUNTIES		77.47			79.10	
RURAL COUNTIES		36.10			37.51	

Note: Indicator values have been scaled between 0 and 100 to provide a frame of reference.

TABLE 21

EMPLOYMENT

1970	EMPLOYMENT				
JURISDICTION	% LABOR FORCE PARTICIPATN	PERCENT UNEMPLOYED	AVERAGE WEEKS UNEMPLOYED	AVERAGE UNEMPLOYED BENEFIT ($)	PERCENT EXHAUSTED BENEFITS
ALLEGANY	69	5	14.10	47.23	23
ANNE ARUNDEL	69	3	9.40	49.90	13
BALTIMORE	73	3	9.50	52.37	18
CALVERT	71	4	13.00	47.95	16
CAROLINE	70	3	7.70	37.04	5
CARROLL	71	2	3.20	51.43	2
CECIL	61	4	6.50	44.90	5
CHARLES	67	3	14.30	46.21	24
DORCHESTER	80	6	11.50	46.32	11
FREDERICK	72	3	9.00	49.10	6
GARRETT	62	0	15.10	48.54	17
HARFORD	61	3	9.00	49.57	7
HOWARD	70	2	9.70	49.13	15
KENT	77	6	12.20	38.65	9
MONTGOMERY	72	2	10.00	53.19	15
PRINCE GEORGE'S	70	2	10.50	52.89	17
QUEEN ANNE'S	77	4	11.30	38.78	5
ST. MARY'S	68	4	12.00	45.51	12
SOMERSET	72	13	15.40	35.18	25
TALBOT	79	3	7.80	38.97	3
WASHINGTON	69	4	8.40	47.41	14
WICOMICO	77	3	9.80	43.78	17
WORCESTER	76	3	13.00	37.15	25
BALTIMORE CITY	73	5	9.70	49.13	15

1973	EMPLOYMENT				
JURISDICTION	% LABOR FORCE PARTICIPATN	PERCENT UNEMPLOYED	AVERAGE WEEKS UNEMPLOYED	AVERAGE UNEMPLOYED BENEFIT ($)	PERCENT EXHAUSTED BENEFITS
ALLEGANY	72	9	16.40	59.79	26
ANNE ARUNDEL	69	3	10.60	63.80	25
BALTIMORE	75	3	11.90	63.41	27
CALVERT	65	3	19.40	61.05	30
CAROLINE	63	0	17.10	62.26	10
CARROLL	71	2	5.70	62.59	3
CECIL	65	7	9.30	53.71	9
CHARLES	51	5	1.70	59.51	20
DORCHESTER	83	7	12.50	48.27	13
FREDERICK	75	6	9.50	69.64	10
GARRETT	85	13	16.20	61.66	30
HARFORD	61	4	8.20	62.44	7
HOWARD	50	2	13.30	61.36	24
KENT	70	10	14.20	66.06	26
MONTGOMERY	77	3	11.40	66.23	20
PRINCE GEORGE'S	70	4	10.70	61.84	29
QUEEN ANNE'S	60	7	10.40	62.69	27
ST. MARY'S	67	5	17.00	58.26	31
SOMERSET	69	11	15.60	42.19	16
TALBOT	01	4	12.30	44.61	12
WASHINGTON	74	0	10.10	57.25	13
WICOMICO	72	6	10.40	53.70	10
WORCESTER	67	14	13.50	47.03	22
BALTIMORE CITY	69	4	13.30	61.36	24

Sources:
1) U.S. Bureau of the Census, Census of Population, 1970, General Social and Economic Characteristics, Final Report PC(1)-C22, Maryland.
2) Maryland State Department of Employment and Social Services (DESS), Monthly Labor Force Estimates, 1970 and 1973.
3) Maryland State Department of Employment and Social Services, Annual Report, 1970 and 1973.
4) Maryland State Department of Health and Mental Hygiene, Center for Health Statistics, Annual Vital Statistics Report, 1970 and 1973.

INCOME SUFFICIENCY/AFFLUENCE

The relative economic status of the population can be stated in terms of the level of income, distribution of income, public assistance measures, and per capita consumption expenditures. In combination, these elements describe different levels of income sufficiency and affluence.

The statistics included in the indicator were:

- age distribution of the white and non-white population;
- the distribution of income;
- public assistance measures; and
- per capita consumption expenditures.

The public assistance measures include the following statistics: (1) old age assistance; (2) disability payments; (3) general public assistance; (4) general public assistance to employables; (5) food stamps; and (6) aid for dependent children.

The composite indicator of income sufficiency/affluence, shown in Table 22, is driven by two inversely related groupings of social statistics. The first consists of the proportion of the white population greater than age 64, the proportion of the population with incomes less than $9,900 and the social statistics which measure public assistance rates. The second grouping consists of the proportion of the white population between ages 18-64, the proportion of the non-white population between ages 18-44, and the proportion of the population with incomes greater than $9,900 (see Tables 23 and 24). As a result of these relationships, the indicator assigns a low rank to counties with a high percent of low income residents, high rates of public assistance, and high percent of white elderly residents. Conversely, counties with a high percentage of residents of working age and a high proportion of residents in higher income groups receive a higher rank.

TABLE 22

INCOME SUFFICIENCY/AFFLUENCE

INDICATORS

JURISDICTION	SCORE 10 20 30 40 50 60 70 80 90 100	1970 INDEX	1970 RANK	SCORE 10 20 30 40 50 60 70 80 90 100	1973 INDEX	1973 RANK
ALLEGANY		47.19	16		63.48	13
ANNE ARUNDEL		85.98	6		82.38	6
BALTIMORE		93.71	3		92.05	3
CALVERT		55.58	13		59.64	15
CAROLINE		18.49	22		37.49	21
CARROLL		72.60	8		82.33	7
CECIL		69.57	9		77.15	9
CHARLES		57.62	11		67.83	11
DORCHESTER		23.27	20		35.08	22
FREDERICK		76.62	7		80.02	8
GARRETT		0.00	24		22.35	23
HARFORD		90.10	5		88.92	5
HOWARD		95.79	2		100.00	1
KENT		44.52	17		54.38	18
MONTGOMERY		100.00	1		93.09	2
PRINCE GEORGE'S		93.30	4		90.54	4
QUEEN ANNE'S		44.31	18		56.91	16
ST. MARY'S		52.06	14		61.00	14
SOMERSET		19.69	21		39.43	20
TALBOT		57.44	12		66.45	12
WASHINGTON		61.09	10		74.23	10
WICOMICO		40.02	19		51.77	19
WORCESTER		47.87	15		56.46	17
BALTIMORE CITY		0.26	23		0.00	24
AVERAGE FOR						
ALL COUNTIES		56.13			63.87	
LESS BALT. CITY		58.56			66.65	
URBAN COUNTIES		76.60			77.46	
RURAL COUNTIES		43.85			55.72	

Note: Indicator values have been scaled between 0 and 100 to provide a frame of reference.

TABLE 23

INCOME SUFFICIENCY/AFFLUENCE

1970	PUBLIC ASSISTANCE PAYMENTS				
JURISDICTION	OLD AGE CASES PER 10,000 POP	DISABLED CASES PER 10,000 POP	GPA CASES PER 10,000 POP	GPAE CASES PER 10,000 POP	APDC CASES PER 10,000 POP
ALLEGANY	41.07	50.83	2.62	***	203.81
ANNE ARUNDEL	10.64	15.48	4.90	0.43	176.25
BALTIMORE	5.38	7.30	2.29	0.16	51.48
CALVERT	33.17	37.02	3.37	***	540.87
CAROLINE	59.09	81.82	15.66	***	310.61
CARROLL	21.90	24.78	5.19	***	81.56
CECIL	18.91	22.28	5.81	***	150.75
CHARLES	22.87	42.20	3.53	***	477.34
DORCHESTER	52.72	79.59	16.33	0.68	277.89
FREDERICK	13.01	13.01	2.23	***	104.45
GARRETT	75.81	73.49	11.16	***	260.93
HARFORD	10.23	8.34	5.33	***	158.90
HOWARD	8.15	10.70	2.72	***	77.80
KENT	42.59	34.57	2.47	***	195.06
MONTGOMERY	4.29	5.10	3.83	0.27	58.19
PRINCE GEORGE'S	6.11	10.36	2.54	***	125.43
QUEEN ANNE'S	45.95	36.76	3.78	***	118.92
ST. MARY'S	35.92	37.18	7.77	***	346.64
SOMERSET	47.62	46.56	10.05	3.70	249.74
TALBOT	25.32	24.89	2.11	***	124.05
WASHINGTON	39.77	34.77	5.09	***	175.70
WICOMICO	39.52	63.05	13.79	1.10	362.68
WORCESTER	36.73	26.12	3.27	***	131.43
BALTIMORE CITY	50.69	118.79	55.50	1.57	992.54

1973	PUBLIC ASSISTANCE PAYMENTS				
JURISDICTION	OLD AGE CASES PER 10,000 POP	DISABLED CASES PER 10,000 POP	GPA CASES PER 10,000 POP	GPAE CASES PER 10,000 POP	APDC CASES PER 10,000 POP
ALLEGANY	32.81	49.16	4.09	***	245.07
ANNE ARUNDEL	13.24	22.93	12.96	2.38	282.89
BALTIMORE	9.22	10.65	7.56	0.54	114.67
CALVERT	34.03	42.86	7.56	***	623.53
CAROLINE	53.20	82.27	15.76	***	389.66
CARROLL	18.90	23.88	4.72	***	141.21
CECIL	17.50	24.13	10.31	***	278.45
CHARLES	27.65	54.40	5.03	***	628.55
DORCHESTER	50.52	78.01	21.65	***	436.08
FREDERICK	13.27	14.91	7.02	1.10	165.35
GARRETT	75.23	65.77	16.22	***	399.55
HARFORD	11.61	14.07	13.20	***	229.57
HOWARD	5.04	8.51	2.40	***	77.34
KENT	31.93	33.73	4.22	1.81	232.53
MONTGOMERY	8.36	8.64	10.27	2.00	142.01
PRINCE GEORGE'S	9.73	18.43	7.41	***	325.02
QUEEN ANNE'S	38.54	31.77	10.94	***	251.04
ST. MARY'S	36.96	40.12	7.91	***	424.70
SOMERSET	43.39	42.86	10.58	***	337.04
TALBOT	20.16	25.00	1.61	***	144.76
WASHINGTON	25.99	33.55	4.44	0.85	242.63
WICOMICO	35.45	71.25	28.92	***	463.49
WORCESTER	32.82	31.30	3.05	***	91.60
BALTIMORE CITY	58.73	146.19	138.49	2.86	1584.48

***Less than .01 percent per 10,000 population

Source: Department of Employment and Social Services, Annual Report, 1970 and 1973.

TABLE 24

INCOME STATISTICS

1970	INCOME DISTRIBUTION BY INDIVIDUAL INCOME TAX RETURNS			
JURISDICTION	PERCENT POPULATION $0-3.9K	PERCENT POPULATION $4K-9.9K	PERCENT POPULATION $10K-19.9K	PERCENT POPULATION >$20K
ALLEGANY	15	49	32	2
ANNE ARUNDEL	14	36	42	8
BALTIMORE	12	37	41	11
CALVERT	18	42	33	7
CAROLINE	21	50	25	2
CARROLL	15	43	37	4
CECIL	16	48	31	4
CHARLES	15	37	41	6
DORCHESTER	24	47	25	4
FREDERICK	16	44	35	5
GARRETT	23	53	22	2
HARFORD	15	37	40	8
HOWARD	12	30	42	16
KENT	22	48	26	5
MONTGOMERY	14	26	34	26
PRINCE GEORGE'S	15	35	40	10
QUEEN ANNE'S	21	48	26	6
ST. MARY'S	20	44	30	6
SOMERSET	27	50	19	2
TALBOT	21	44	26	9
WASHINGTON	17	48	31	4
WICOMICO	19	45	31	6
WORCESTER	24	46	24	6
BALTIMORE CITY	19	51	26	5

1973	INCOME DISTRIBUTION BY INDIVIDUAL INCOME TAX RETURNS			
JURISDICTION	PERCENT POPULATION $0-3.9K	PERCENT POPULATION $4K-9.9K	PERCENT POPULATION $10K-19.9K	PERCENT POPULATION >$20K
ALLEGANY	12	39	42	7
ANNE ARUNDEL	11	29	42	18
BALTIMORE	10	30	42	17
CALVERT	13	34	38	15
CAROLINE	14	43	35	8
CARROLL	10	34	44	12
CECIL	12	37	41	9
CHARLES	11	29	42	18
DORCHESTER	17	45	31	8
FREDERICK	12	36	41	13
GARRETT	16	47	31	5
HARFORD	11	31	42	16
HOWARD	10	25	37	28
KENT	16	42	32	10
MONTGOMERY	12	24	30	34
PRINCE GEORGE'S	12	30	37	20
QUEEN ANNE'S	15	41	34	12
ST. MARY'S	15	37	36	11
SOMERSET	20	48	26	6
TALBOT	16	39	31	15
WASHINGTON	12	39	41	9
WICOMICO	14	39	36	11
WORCESTER	19	42	29	10
BALTIMORE CITY	14	45	34	7

Source: State of Maryland, Comptroller of the Treasury, Income Tax Division: Individual Income Tax Returns Filed for the Year 1970 and 1973.

TABLE 24 (Con't.)

INCOME STATISTICS

1970	CONSUMER SPENDING		1973	CONSUMER SPENDING	
JURISDICTION	CONSUMER SPENDING $/CAPITA	FOOD STAMP CASES PER 10,000 POP	JURISDICTION	CONSUMER SPENDING $/CAPITA	FOOD STAMP CASES PER 10,000 POP
ALLEGANY	1364	97	ALLEGANY	1748	165
ANNE ARUNDEL	1255	43	ANNE ARUNDEL	1684	100
BALTIMORE	1519	15	BALTIMORE	2108	40
CALVERT	823	***	CALVERT	1091	194
CAROLINE	886	136	CAROLINE	1129	242
CARROLL	899	45	CARROLL	1224	53
CECIL	807	57	CECIL	1217	133
CHARLES	1063	200	CHARLES	1549	232
DORCHESTER	1029	74	DORCHESTER	1408	201
FREDERICK	1447	36	FREDERICK	1783	58
GARRETT	879	209	GARRETT	1392	302
HARFORD	897	***	HARFORD	1172	83
HOWARD	944	18	HOWARD	1616	29
KENT	1421	56	KENT	1605	139
MONTGOMERY	1467	24	MONTGOMERY	1996	53
PRINCE GEORGE'S	1284	32	PRINCE GEORGE'S	1823	126
QUEEN ANNE'S	792	50	QUEEN ANNE'S	1067	133
ST. MARY'S	756	106	ST. MARY'S	990	195
SOMERSET	529	115	SOMERSET	749	226
TALBOT	1823	50	TALBOT	2362	85
WASHINGTON	1414	78	WASHINGTON	1951	126
WICOMICO	2089	117	WICOMICO	2896	231
WORCESTER	2679	31	WORCESTER	3553	98
BALTIMORE CITY	1789	252	BALTIMORE CITY	2239	640

Sources: 1) State of Maryland, Comptroller of the Treasury, Retail Sales Tax Division, Annual Statistics Reports, 1970 and 1973.
2) Maryland State Department of Health and Mental Hygiene, Center for Health Statistics, Annual Vital Statistics Report, 1970 and 1973.
3) Maryland State Department of Employment and Social Services, Annual Report, 1970 and 1973.

The urban counties, except the City of Baltimore, had higher composite indicator levels in both 1970 and 1973 than the rural counties, as shown in Table 24, which reaffirms the well-known fact that income levels are higher in the suburbs than in rural counties and the inner city. Baltimore had a very low composite indicator level in both 1970 and 1973. In 1970 Baltimore was twenty-third and in 1973 was twenty-fourth. This reflects a high rate of public assistance and a high proportion of low income residents in the City. Baltimore's rank on the income sufficiency/affluence indicator is characteristic of the condition of many older cities whose upper middle income population has gone to the suburbs, leaving the poor behind. Baltimore's problem is further compounded by its large population eligible for public assistance.

Montgomery, Howard, Baltimore and Prince George's Counties have the best composite indicator levels in Maryland in both 1970 and 1973. Montgomery and Prince George's Counties are directly impacted by the prosperity in the Washington, D.C. SMSA engendered by the Federal Government. On the other hand, the three Eastern Shore counties of Somerset, Dorchester, and Caroline, and the Western Maryland county of Garrett have the lowest composite indicator scores, due to a concentration of low income residents and high public assistance levels. With the exception of Cecil and Talbot Counties, the Eastern Shore jurisdictions have the lowest composite income levels of all Maryland counties. Cecil is influenced by prosperity of the Wilmington SMSA. Talbot County may in part be impacted in its growth as a retirement community.

Between 1970 and 1973 there was almost no change in the indicator value for the urban counties. It should be noted, however, that the urban county average score is quite high at 77. As a result, a major upward change in the component counties which were quite high in 1970 would be required to effect a significant shift in the average urban county score. Over the same period, the rural county indicator increased from almost 44 to over 55. This suggests that there has been a significant improvement in the status of the rural counties.

X. PROMOTION OF EDUCATIONAL DEVELOPMENT

INTRODUCTION

The educational status of the population supplies a measure of the opportunity for social- and self-fulfillment and plays an essential role in the opportunity for social and economic well-being. Educational development is a major factor in the socialization of the population, affecting the ability to participate in society, and the development of behavior and attitudes. Economically, education can be viewed as an investment in human resources, affecting income and employment opportunities.

The level of educational development varies with socioeconomic status and geographic location. The indicator developed reflects the population's relative ability to attain a particular social status and the corresponding level of economic security. Originally, it was hoped that indicators could also be developed to reflect population status with respect to development and attainment of basic, advanced, and vocational skills. However, because of technical problems, as explained below, it was not possible to develop these indicators at this time.

EDUCATION AND SOCIOECONOMIC STATUS

Educational status is an indicator of educational attainment of the adult population. The statistics used for this indicator were comprised of variables relating to: educational distribution of the adult population (25 years and older), an estimated income distribution, and the age distribution by race.

The indicator reflects the statistical relationship between educational attainment, sex, income and age by race. The resulting indicator suggests the level of social attainment and the economic attainment associated with a given population.

PARTICIPATION OF SCHOOL AGE CHILDREN IN BASIC SKILLS

The basic skills indicator would have reflected the potential to achieve that level of educational development which is necessary to participate in society, pursue one's intellectual and cultural interests, and obtain a reasonable level of economic opportunity. The statistics postulated for this indicator were enrollment, withdrawals, holding power, student/teacher ratios, total expenditure per student, and percent of students transported.

The percentages of various age groups of the population who are enrolled in school represent that portion of the youth who are currently participating in formalized education and implicitly those who are not. Thus, it reflects the general current educational status of the youth of Maryland and would be an indication of the extent to which future educational potential can be realized. The percent of students transported was considered as an indicator of educational accessibility.

Holding power (completion of secondary education) represents the propensity to reach a minimum level of attainment within the existing social environment. Student withdrawals represent the loss of potential to reach a minimum level of attainment.

Both student/teacher ratios and per pupil expenditures reflect in part the quality of education, and in turn suggest the potential opportunity to achieve a specific level of quality in education as well as in other pursuits.

The analysis and developmental work on this indicator did not result in a reasonable indicator for depicting basic skills. However, in view of the importance of primary and secondary education, selected statistics are presented in the following section.

ADVANCED SKILLS

Because statistics for this indicator were available only on a statewide basis, they could not be used in the development of a social indicator. It was originally hypothesized, however, that advanced skills would identify that portion of the population having a greater opportunity to attain higher levels of knowledge and skills, which contribute, in turn, to social and economic well-being, self-fulfillment, and the ability to contribute to society. The statistics considered for this indicator were high school graduates entering college, adult education, financial assistance, and degrees awarded.

VOCATIONAL-TECHNICAL SKILLS

Vocational-technical skill achievement is representative of one aspect of the theory that education is an investment in human resources. The attainment of specialized skills suggests occupational security and economic opportunity, i.e., job opportunities and increased income, respectively. The statistics used to develop this indicator were the percentages of the secondary and post-secondary students enrolled in vocational-technical areas, the vocational rehabilitation cases who have been rehabilitated, the unemployment rates, and the labor force participation rates. Enrollment in vocational-technical programs was to indicate the relative demand and need for special occupational skills.

The percentage rehabilitated was to indicate the portion of this group that has overcome barriers to the attainment of a particular skill level; this would suggest the achievement of independence to pursue social and economic well-being.

Unfortunately, the indicator created did not in fact provide a reasonable measure of the above hypothesis. It should be possible in the future to develop the analysis and produce a stronger indicator.

EDUCATIONAL AND SOCIOECONOMIC STATUS

This indicator is based on age, race, income, and educational attainment for the population over 25 years of age. The indicator is intended to reflect the relative status of the population with respect to educational attainment and the extent to which educational attainment corresponds with economic status.

The statistics which most influence the indicator are levels of educational attainment by sex and income. While included in the indicator, the overall age distribution by race and the proportion of non-whites do not have the same level of statistical weight. As a result, any single one of these latter statistics does not significantly impact the indicator value for a particular county.

There is a discernible difference in the way educational attainment by sex influences the indicator value (see Table 25). For males, the statistical relationship, and thus the positive impact on the indicator, is confined to attainment of a college degree or more. For females, a significant statistical relationship, and thus a positive impact on the indicator, includes not only college level and greater attainment but high school (12 years or more) attainment as well.

This relationship reflects a difference in sex with respect to income generation. In the indicator the higher incomes are associated for the most part with college level men and with women who have the minimum of a high school education.

There is a positive relationship between the indicator value and education and income. The greater the proportion of persons with the highest category of education and income, the higher the indicator value will be.

As a result of the basic structure of this indicator, the results very closely parallel the socioeconomic status score presented in the first part of this report. Unlike the socioeconomic

TABLE 25

EDUCATIONAL STATUS

1970	EDUCATIONAL STATUS - MALES OVER 25					
JURISDICTION	PERCENT WITH LESS THAN 9 YRS	PERCENT WITH 9-11 YRS	PERCENT WITH 12 YRS	PERCENT WITH 13-15 YRS	PERCENT WITH 16 YRS	PERCENT WITH >16 YRS
ALLEGANY	33	19	33	6	4	4
ANNE ARUNDEL	26	19	30	10	9	9
BALTIMORE	27	20	25	11	10	8
CALVERT	44	10	27	5	8	3
CAROLINE	43	20	19	4	3	3
CARROLL	42	21	20	6	4	4
CECIL	36	26	24	7	4	3
CHARLES	30	19	34	8	5	4
DORCHESTER	49	25	16	5	3	2
FREDERICK	36	23	23	6	6	7
GARRETT	49	13	26	3	2	2
HARFORD	27	19	26	10	9	9
HOWARD	23	17	23	10	14	14
KENT	42	25	18	6	5	6
MONTGOMERY	10	9	21	15	17	20
PRINCE GEORGE'S	16	17	31	14	10	13
QUEEN ANNE'S	46	25	19	4	3	3
ST. MARY'S	30	16	33	8	8	5
SOMERSET	50	39	14	3	1	2
TALBOT	36	27	16	8	6	7
WASHINGTON	33	21	30	7	5	4
WICOMICO	36	25	23	7	6	4
WORCESTER	44	25	18	7	4	2
BALTIMORE CITY	44	23	23	7	4	5

1970	EDUCATIONAL STATUS - FEMALES OVER 25					
JURISDICTION	PERCENT WITH LESS THAN 9 YRS	PERCENT WITH 9-11 YRS	PERCENT WITH 12 YRS	PERCENT WITH 13-15 YRS	PERCENT WITH 16 YRS	PERCENT WITH >16 YRS
ALLEGANY	39	20	37	8	4	2
ANNE ARUNDEL	24	22	37	10	6	2
BALTIMORE	25	22	35	9	6	3
CALVERT	35	23	29	8	4	2
CAROLINE	37	33	22	6	4	1
CARROLL	35	27	26	6	4	2
CECIL	20	27	33	7	3	2
CHARLES	25	24	40	6	3	2
DORCHESTER	38	32	19	6	3	1
FREDERICK	32	29	23	8	5	3
GARRETT	41	21	29	5	3	1
HARFORD	23	24	35	10	6	2
HOWARD	20	10	35	11	10	4
KENT	29	31	23	13	5	2
MONTGOMERY	10	11	37	19	15	8
PRINCE GEORGE'S	15	19	43	12	8	4
QUEEN ANNE'S	36	27	24	9	4	1
ST. MARY'S	24	22	37	10	6	2
SOMERSET	48	34	13	5	3	1
TALBOT	26	32	22	11	6	3
WASHINGTON	31	23	34	8	4	1
WICOMICO	30	28	25	9	5	2
WORCESTER	34	32	21	8	3	2
BALTIMORE CITY	40	25	23	6	3	2

Note: Rows may not add to 100 percent due to rounding.

Source: Based on U.S. Bureau of the Census, Census of Population, 1970, General Social and Economic Characteristics, Final Report PC(1)-C22, Maryland.

status score, this indicator includes the population, age, and race distribution and excludes occupation (see Table 26).

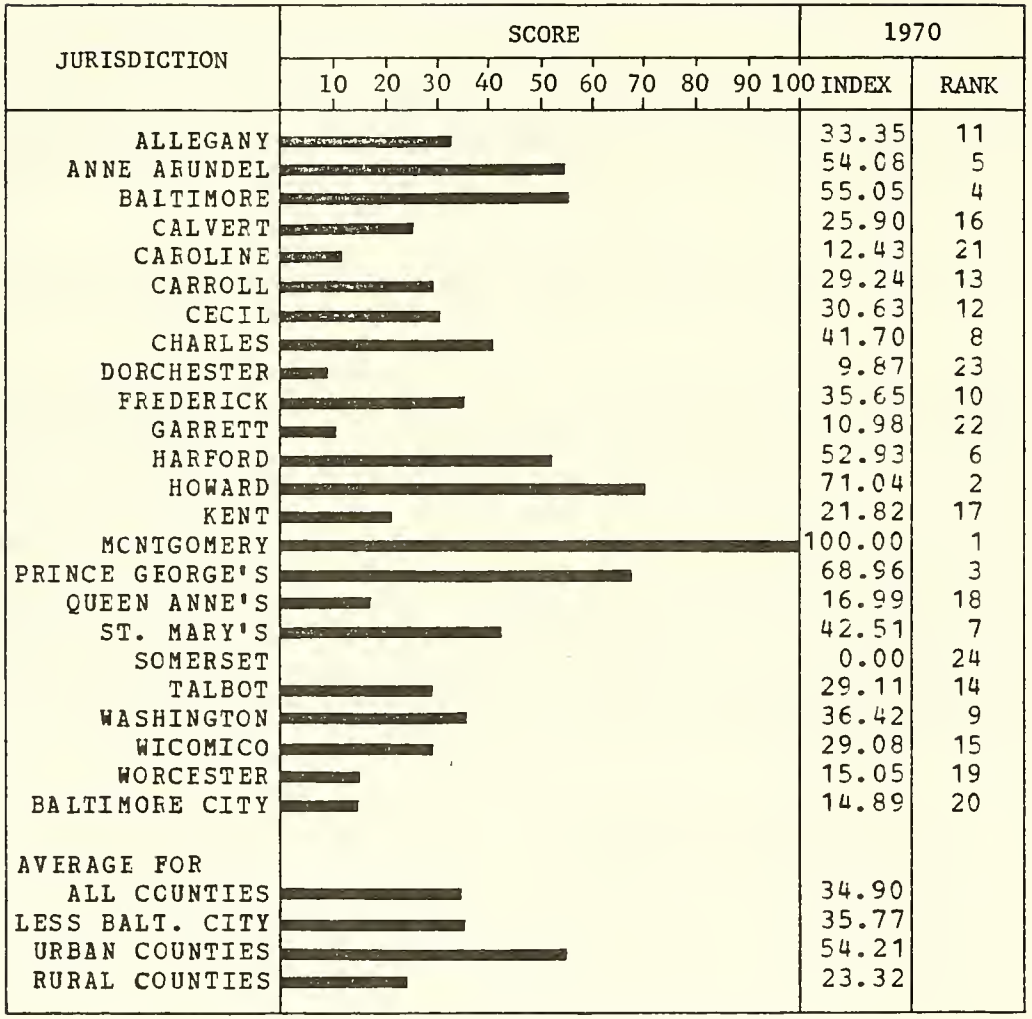
There is a major difference between the urban and rural areas; the rural areas average more than 30 points below the urban areas. This not unexpected result probably arises from the economic opportunities associated with the urban areas which in turn attract the highly educated, more highly paid individuals. The exception is the City of Baltimore which ranks number 20. As occurs in most big cities, the population living within the city tends to be less well educated and thus less well paid.

In terms of the education and economic status indicator, the counties, with only a few exceptions, group in three very definable geographic patterns, as shown in Table 27.

The urban counties, with the exception of the City of Baltimore, correspond closely in rank form the first group, and are the top eight in rank. The second group includes the urban fringe and Allegany and Talbot Counties. The third group is comprised of the remaining rural counties and the City of Baltimore. Garrett County's low ranking is probably directly associated with the high levels of unemployment present in 1970 and the corresponding loss of income. Calvert County's low ranking is attributable to the very high proportion of persons with less than 8 years of education. One of the factors which may influence the low rankings of the Eastern Shore counties is the relative lack of economic opportunity present and the past out-migration patterns of the younger, better educated, and more affluent population. In 1970, these counties had, relative to the rest of the State, a very high proportion of their total population over the age of 65, which further supports the migration hypothesis.

TABLE 26

EDUCATION AND SOCIOECONOMIC STATUS



JURISDICTION	1970 INDEX	1970 RANK
ALLEGANY	33.35	11
ANNE ARUNDEL	54.08	5
BALTIMORE	55.05	4
CALVERT	25.90	16
CAROLINE	12.43	21
CARROLL	29.24	13
CECIL	30.63	12
CHARLES	41.70	8
DORCHESTER	9.87	23
FREDERICK	35.65	10
GARRETT	10.98	22
HARFORD	52.93	6
HOWARD	71.04	2
KENT	21.82	17
MONTGOMERY	100.00	1
PRINCE GEORGE'S	68.96	3
QUEEN ANNE'S	16.99	18
ST. MARY'S	42.51	7
SOMERSET	0.00	24
TALBOT	29.11	14
WASHINGTON	36.42	9
WICOMICO	29.08	15
WORCESTER	15.05	19
BALTIMORE CITY	14.89	20
AVERAGE FOR ALL COUNTIES	34.90	
LESS BALT. CITY	35.77	
URBAN COUNTIES	54.21	
RURAL COUNTIES	23.32	

Note: Indicator values have been scaled between 0 and 100 to provide a frame of reference.

TABLE 27

EDUCATIONAL AND SOCIOECONOMIC STATUS RANK GROUPING

Rank	Jurisdictions in Pattern	Exceptions	Geographic Section
1	Montgomery		
2	Howard		
3	Prince George's		
4	Baltimore		Urban
5	Anne Arundel		
6	Harford		
7		St. Mary's	
8	Charles		
9	Washington		
10	Frederick		
11		Allegany	
12	Cecil		Urban Fringe
13	Carroll		
14		Talbot	
15	Wicomico		
16	Calvert		
17	Kent		
18	Queen Anne's		
19	Worcester		Rural
20		Baltimore City	
21	Caroline		
22	Garrett		
23	Dorchester		
24	Somerset		

SCHOOL SYSTEM CHARACTERISTICS

The social statistics discussed in the following paragraphs describe some of the school system characteristics. Due to the importance of measuring the potential educational attainment of the school age population, Table 28 was included to characterize the Maryland counties by school system status. The statistics, shown in Table 29, depict the enrollment of pre-school, elementary and secondary students in the education system. The social statistics were selected for presentation based on importance and relevance for understanding the current status of the educational system.

In general the student measures, with the exception of the statistic which measures the number of students per full time equivalent teachers, exhibit the same characteristics as the educational status indicator. The statistics which measure the status of the school system rank the urban counties higher than the rural counties.

Holding power (completion of secondary education) and percent of student withdrawals most clearly exhibit this pattern which suggests a relationship between school system performance and educational status. Expenditures per pupil exhibit the same urban/rural pattern which is found in the other student measures. Montgomery's County's expenditures per pupil were much greater than any other county in 1970 and 1973. Correspondingly, Montgomery County's holding power was highest in 1970 and second highest in 1973. In addition, the percent of withdrawals in Montgomery in both 1970 and 1973 were very low. This would suggest that level of expenditure is in part associated with student persistence. However, it should also be noted that Montgomery County ranks highest on SES, employment, and educational status indicators. This, coupled with a similar comparison for other counties, suggests that the demographic and economic condition of a county is also associated with a county's status with respect to student characteristics.

The City of Baltimore had the lowest holding power and highest percent of withdrawals in both 1970 and 1973, thus reinforcing the observation that the socioeconomic condition

TABLE 28

SCHOOL SYSTEM STUDENT MEASURES

1970	SCHOOL SYSTEM STUDENT MEASURES				
JURISDICTION	PERCENT HOLDING POWER	STUDENTS PER FTE STAFF*	TOTAL COST PER PUPIL	PERCENT WITH-DRAWALS	PERCENT TRANS-PORTED
ALLEGANY	92	20.30	760.82	2	56
ANNE ARUNDEL	75	20.30	760.81	4	61
BALTIMORE	82	19.20	875.10	2	50
CALVERT	69	21.00	801.24	4	92
CAROLINE	79	19.90	740.48	4	85
CARROLL	89	19.80	710.91	3	80
CECIL	76	22.00	700.13	5	77
CHARLES	79	21.90	790.76	4	85
DORCHESTER	71	19.60	800.11	4	70
FREDERICK	81	20.10	787.89	3	67
GARRETT	83	19.20	739.02	1	90
HARFORD	78	19.60	767.01	4	70
HOWARD	92	19.50	855.03	2	81
KENT	72	19.90	832.10	4	78
MONTGOMERY	93	19.30	1043.22	2	40
PRINCE GEORGE'S	85	19.30	878.90	3	43
QUEEN ANNE'S	79	19.50	772.95	5	94
ST. MARY'S	77	20.10	750.70	8	85
SOMERSET	75	20.70	697.50	6	70
TALBOT	76	19.60	826.51	3	60
WASHINGTON	81	20.50	800.00	3	71
WICOMICO	81	19.60	691.01	4	60
WORCESTER	78	19.90	759.36	4	80
BALTIMORE CITY	56	20.90	826.07	9	27

1973	SCHOOL SYSTEM STUDENT MEASURES				
JURISDICTION	PERCENT HOLDING POWER	STUDENTS PER FTE STAFF*	TOTAL COST PER PUPIL	PERCENT WITH-DRAWALS	PERCENT TRANS-PORTED
ALLEGANY	91	19.00	985.17	2	68
ANNE ARUNDEL	84	18.50	1092.13	2	65
BALTIMORE	87	17.60	1161.72	3	56
CALVERT	69	18.60	1013.50	4	95
CAROLINE	73	18.00	939.59	5	87
CARROLL	86	18.20	974.77	3	89
CECIL	73	20.30	873.49	6	74
CHARLES	69	20.20	1092.36	4	88
DORCHESTER	75	17.60	1044.03	5	74
FREDERICK	84	19.40	973.13	3	71
GARRETT	85	19.20	858.77	4	92
HARFORD	75	18.90	963.77	1	75
HOWARD	103	18.20	1122.60	2	69
KENT	74	17.10	1056.22	6	86
MONTGOMERY	97	17.00	1436.97	2	45
PRINCE GEORGE'S	80	18.30	1110.17	3	51
QUEEN ANNE'S	83	18.90	938.19	4	93
ST. MARY'S	64	19.10	922.74	5	95
SOMERSET	72	19.10	921.05	6	75
TALBOT	79	16.20	1053.05	4	72
WASHINGTON	80	18.30	976.61	1	80
WICOMICO	80.	18.40	918.27	5	77
WORCESTER	71	16.70	1053.60	4	79
BALTIMORE CITY	65	19.30	900.16	9	33

*FTE Is Full Time Equivalent

Sources: 1) Maryland State Department of Education, Annual Report, 1970-1973.
2) Department of Education, Facts About Maryland Public Schools, 1970-1973.
3) Department of Education, Bureau of Administrative Services, Public School Pupil Transportation in Maryland: A Statistical Review for the Year Ending June 30, 1972.

TABLE 29

ENROLLMENT

1970	ENROLLMENT				
JURISDICTION	PERCENT POP 1-4 PRESCHOOL	PERCENT POP 5-17 PUBLIC SCH.	PERCENT POP 5-17 PRIVATE SH.	PERCENT ELEMENTARY ADA*	PERCENT SECONDARY ADA*
ALLEGANY	***	89	11	95	94
ANNE ARUNDEL	1	89	8	94	91
BALTIMORE	3	82	15	94	91
CALVERT	***	93	8	91	89
CAROLINE	***	100	3	95	93
CARROLL	***	97	2	95	94
CECIL	***	89	10	94	91
CHARLES	***	85	10	93	89
DORCHESTER	***	94	***	95	90
FREDERICK	3	87	9	95	91
GARRETT	***	94	***	95	95
HARFORD	1	93	6	95	92
HOWARD	7	94	11	95	93
KENT	***	97	4	94	92
MONTGOMERY	7	86	13	94	90
PRINCE GEORGE'S	3	90	9	94	90
QUEEN ANNE'S	***	90	4	95	91
ST. MARY'S	***	81	20	95	90
SOMERSET	***	99	***	93	91
TALBOT	1	89	10	95	92
WASHINGTON	2	93	7	96	94
WICOMICO	3	100	2	95	93
WORCESTER	***	109	2	94	92
BALTIMORE CITY	4	85	14	90	81

1973	ENROLLMENT				
JURISDICTION	PERCENT POP 1-4 PRESCHOOL	PERCENT POP 5-17 PUBLIC SCH.	PERCENT POP 5-17 PRIVATE SH.	PERCENT ELEMENTARY ADA*	PERCENT SECONDARY ADA
ALLEGANY	3	89	11	95	96
ANNE ARUNDEL	5	83	8	94	90
BALTIMORE	8	83	16	94	91
CALVERT	1	95	9	93	89
CAROLINE	***	93	3	94	92
CARROLL	1	97	2	95	92
CECIL	***	92	11	94	90
CHARLES	4	92	10	94	89
DORCHESTER	***	99	1	95	90
FREDERICK	4	93	7	94	90
GARRETT	***	93	***	95	93
HARFORD	3	93	7	95	92
HOWARD	20	86	12	95	92
KENT	***	95	4	94	90
MONTGOMERY	13	87	16	93	89
PRINCE GEORGE'S	5	80	12	95	88
QUEEN ANNE'S	0	97	5	94	90
ST. MARY'S	3	86	21	94	90
SOMERSET	***	100	***	94	87
TALBOT	2	87	16	94	91
WASHINGTON	4	91	7	95	92
WICOMICO	8	100	4	95	92
WORCESTER	***	100	0	95	93
BALTIMORE CITY	5	87	10	83	70

*ADA is Average Daily Attendance

***Less than 1 percent

Sources: 1) Maryland State Department of Education, Annual Report, 1970 and 1973.
2) Department of Health and Mental Hygiene, Center for Health Statistics, Annual Vital Statistics Report, 1970 and 1973.

of a geographic area is associated with levels of student participation. The City of Baltimore also ranks low on other social indicators.

The urban/rural pattern is also present in the statistic which measures the percent of the population in pre-school. The urban counties had a greater percent of their children in pre-school in both 1970 and 1973 than the rural counties. Every county which had children in pre-school programs in 1970 had a higher percentage of children in pre-school in 1973.

The percentage of average daily attendance for both elementary and secondary school did not vary significantly by county except for the City of Baltimore. The City of Baltimore had the lowest percentage of average daily attendance in Maryland. This also suggests that socioeconomic status (Baltimore ranked lowest) is associated with the level of children's participation in education.

The urban jurisdictions had less children transported to school by bus than the rural counties. This can be attributed to the nature of centralized rural schools designed to serve low density, highly dispersed populations.

XI. PROVISION OF ADEQUATE HOUSING AND COMMUNITY NEEDS

INTRODUCTION

This activity sector can be divided into two distinct parts: adequate housing and community development. The indicator analysis and development work focused upon adequate housing. Community development indicators were not developed at this time because of the lack of required data and applicability of measures at the county level.

A major goal for adequate housing is the provision for a decent home in a suitable living environment for every family. Three major areas of concern were postulated for indicator development with respect to this goal: housing availability and cost, housing needs, and substandard housing. The housing availability area is intended to provide an indicator of both the general availability or supply of housing for a particular population and of the economic availability of that housing for that same population. The resulting indicator thus provides a composite indicator in physical units and economic terms of the housing available to residents within a particular jurisdiction.

The second area of concern for which an indicator was postulated addresses the demand for housing in terms of a particular population's specific needs, e.g., household size, income, etc. The third area is intended to provide a relative measure of the quality of housing stock for a jurisdiction's population and in turn reflect the relative status of the population with respect to a safe, sanitary, and comfortable environment.

As a result of the analysis, only two of the indicators were actually developed: housing availability and cost, and housing quality. The housing needs indicator was not fully developed because the available data for both 1970 and 1973 were inadequate to allow for the construction of a meaningful indicator. In addition, the housing availability and cost and the housing quality indicators were calculated only for 1970 since they rely on 1970 census of housing data which were not available for later periods.

HOUSING AVAILABILITY AND COST

The housing availability and cost indicator was based upon statistics which suggest the overall supply of new and replacement housing and the cost of that housing with respect to a specific population characterized in terms of income, age, and race. The indicator is comprised of annual new housing units, percentage of new single family and multifamily units, median contract rent, median sales price, and the basic population characteristics.

The resulting composite indicator is intended to reflect the relationship between income, new housing units, and cost of purchase and/or rent. The resulting indicator suggests a measure of population affluence and the potential to attain housing from the available and new supply with respect to that level of affluence.

HOUSING QUALITY

The housing quality indicator was based upon statistics which identify the degree to which housing is available within a particular jurisdiction. The indicator is comprised of the proportion of substandard units, the proportion of units without plumbing, the proportion of units without heat, the proportion of overcrowded units, and basic population characteristics. The resulting indicator provides a measure of the status of a particular population as defined by age, race, and income characteristics with respect to the extent of substandard housing. This relative measure suggests the degree to which a particular population has attained or has not attained safe, sanitary, and comfortable housing as defined by the component statistics.

HOUSING NEEDS

The housing needs indicator was designed to reflect the status of the population in terms of the physical and economic need for quality housing. The basic components postulated for this indicator were: (1) number of households, (2) household size, (3) income, (4) household formation rate, and (5) special subpopulations (i.e., aged and minority). The number of households is an indicator of the total amount

of housing needs. Average household size and special subpopulations measure different housing demand and need patterns by age and race. Family income distribution indicates the ability or opportunity of the households to obtain quality housing. The household formation rate measures the amount of changing housing needs over time. This indicator was not developed.

HOUSING AVAILABILITY AND COST

The intended components of the availability and cost of housing indicator were the basic supply, type, and cost of housing available to a specific population. The indicator was intended to represent the relative opportunity or potential to obtain or have housing within a household's economic means. The actual statistics included in the indicator are:

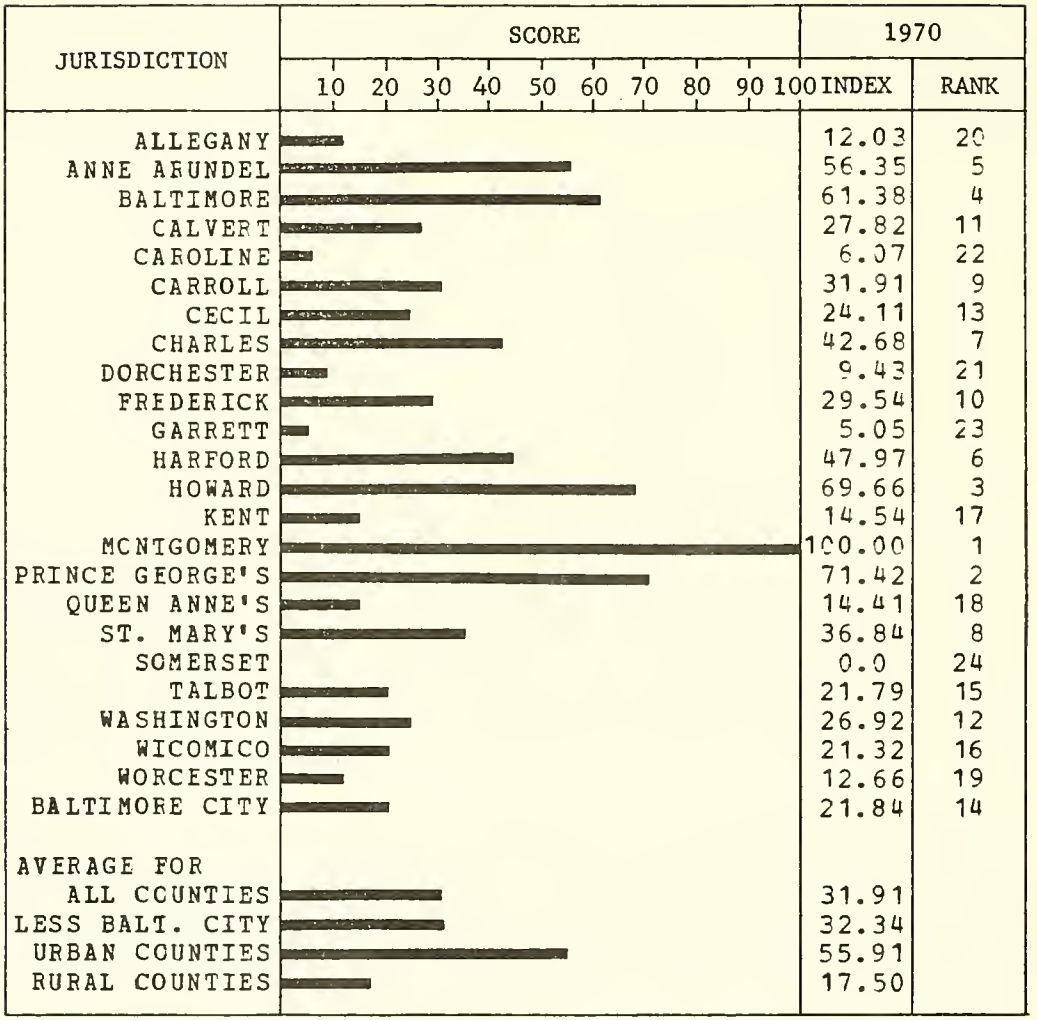
- new additions to the housing stock;
- median sales price per unit;
- median contract rent;
- percentage of new single family units;
- percentage of new multifamily units; and
- age, race, and income characteristics of the population.

New additions to the housing stock provide an estimate of the annual new and replacement units available to the population either for rent or sale. Median sales price and median contract rent provide an indicator of the economic availability of units with respect to the population's income. The proportion of single family and multifamily units indicate the different types of new units being made available to the population.

The composite indicator (see Table 30) is most sensitive to income, annual new units, median rent, and median sales price. The higher each of these values is for a particular county, the higher the resulting indicator value will be. In the case of income, upper middle and high income levels will increase the indicator value and reflect the ability to afford housing. Conversely, lower middle and low income will depress the indicator value, reflecting, in part, housing need.

TABLE 30

HOUSING AVAILABILITY AND COST INDICATORS



JURISDICTION	1970 INDEX	1970 RANK
ALLEGANY	12.03	20
ANNE ARUNDEL	56.35	5
BALTIMORE	61.38	4
CALVERT	27.82	11
CAROLINE	6.07	22
CARROLL	31.91	9
CECIL	24.11	13
CHARLES	42.68	7
DORCHESTER	9.43	21
FREDERICK	29.54	10
GARRETT	5.05	23
HARFORD	47.97	6
HOWARD	69.66	3
KENT	14.54	17
MONTGOMERY	100.00	1
PRINCE GEORGE'S	71.42	2
QUEEN ANNE'S	14.41	18
ST. MARY'S	36.84	8
SOMERSET	0.0	24
TALBOT	21.79	15
WASHINGTON	26.92	12
WICOMICO	21.32	16
WORCESTER	12.66	19
BALTIMORE CITY	21.84	14
AVERAGE FOR ALL COUNTIES	31.91	
LESS BALT. CITY	32.34	
URBAN COUNTIES	55.91	
RURAL COUNTIES	17.50	

Note: Indicator values have been scaled between 0 and 100 to provide a frame of reference.

Statistically, the proportion of elderly present is inversely related to high income, new units, median rent, and median sales price. As a result, the proportion of the elderly tends to depress the indicator. The indicator component statistics are shown in Table 31.

The urban counties have a substantially higher average indicator value than do the rural counties. The counties which rank 1 thru 7 (Montgomery, Prince George's, Howard, Baltimore, Anne Arundel, Harford, Charles) are either in the Washington, D.C., or Baltimore SMSA and are impacted by economic growth and the demand for housing. This is particularly true for Montgomery and Prince George's Counties, both of which had unusually high cost of housing, high income, and heavy new construction as a result of the Washington, D.C. metropolitan growth. Anne Arundel County is being affected in the same manner, to a lesser extent.

St. Mary's County, which ranks number 8, is a rural county, but is undergoing substantial development for retirement and summer housing. As a result, new units, cost of housing, and income levels have been increasing as reflected by its relatively high rank.

The City of Baltimore ranks number 14. This is probably a result of Baltimore's lower income levels and relative inactivity in developing new housing.

With the exception of Washington County, the Eastern Shore and Western Maryland counties generally rank lowest. This is attributable primarily to lower incomes, lower housing values, and a lower level of annual new units. In addition, the Eastern Shore counties have a generally older population further depressing the indicator.

TABLE 31

HOUSING AVAILABILITY AND COST

1970	HOUSING AVAILABILITY AND COST				
JURISDICTION	ANNUAL NEW HOUSING UNITS	PERCENT NEW SINGLE FAMILY UNITS	PERCENT NEW MULTI-FAMILY UNITS	MEDIAN CONTRACT RENT ($)	MEDIAN SALES PRICE ($)
ALLEGANY	199.00	80	20	57	11800
ANNE ARUNDEL	3832.00	46	55	118	19700
BALTIMORE	6182.00	19	81	116	17500
CALVERT	245.00	100	***	86	18700
CAROLINE	316.00	100	***	54	11100
CARROLL	669.00	63	37	79	19300
CECIL	256.00	80	20	80	15500
CHARLES	644.00	100	***	105	22700
DORCHESTER	195.00	54	46	54	12400
FREDERICK	461.00	96	4	85	18700
GARRETT	254.00	53	47	56	10800
HARFORD	1530.00	68	32	104	22200
HOWARD	2879.00	59	41	130	28800
KENT	105.00	89	11	68	14600
MONTGOMERY	8203.00	51	49	166	32900
PRINCE GEORGE'S	5247.00	61	39	143	23800
QUEEN ANNE'S	168.00	100	***	63	15100
ST. MARY'S	355.00	96	4	112	20300
SOMERSET	3.00	100	***	51	9800
TALBOT	233.00	57	43	69	17700
WASHINGTON	676.00	41	59	68	16300
WICOMICO	402.00	46	55	70	14200
WORCESTER	393.00	34	66	58	12400
BALTIMORE CITY	1322.00	3	97	90	10000

***Less than 1 percent

Sources: 1) Baltimore SMSA, 1970, Regional Planning Council Standard Building Permit Reporting System.
2) Washington Suburban Area, 1970, Metropolitan Washington Council of Governments and the U.S. Bureau of the Census, Construction Reports, Series C-40.
3) Remainder of Maryland, 1970, U.S. Bureau of the Census, Construction Reports, Series C-40,
4) U.S. Bureau of the Census, Detailed Housing Characteristics, 1970, HC(1)-B22, Maryland, Table 61.

While the indicator was developed as a housing indicator, it is clear that it also reflects a measure of both affluence and economic conditions. The rankings based upon this indicator are quite close and consistent with the overall SES indicator presented at the beginning of this report.

HOUSING QUALITY

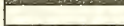
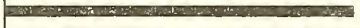
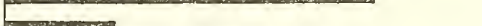
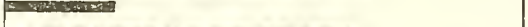
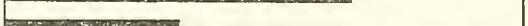
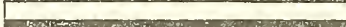
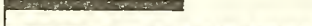
The housing quality indicator reflects the status of the population with respect to their living environment by measuring the extent to which quality housing stock is present and in use by a particular population. The basic components of this indicator are housing units without plumbing and heat facilities, substandard units, overcrowded housing units, income distribution of the population, and age/race distribution of the population. The first three of these basic components depicts a negative or undesirable housing environment condition. The percent of units without plumbing and heat depicts physical conditions that affect comfort, health, and safety in the population's living environment. The percent of substandard units provides an indication of the population disadvantaged by living in unsafe and dangerous conditions. Finally, the degree of overcrowding reflects a negative basic comfort measure.

The indicator is most sensitive to income, the older white population, the proportion of the non-white population, the proportion of substandard units, and the proportion of units without plumbing. Each of these statistics is statistically interrelated within the indicator framework. The indicator value increases in jurisdictions characterized by high incomes and very low levels of substandard units. The proportion of the non-white population and the proportion of the older white population (over 65) are statistically associated with the negative features of the indicator, i.e., substandard housing and low income. As a result, high levels of these statistics serve to lower the indicator value.

The urban counties rank highest on this indicator which means they have a higher quality housing status than the sparsely populated, predominantly rural counties (see Table 32). Montgomery, Howard, Prince George's, Baltimore, and Anne Arundel counties rank first through fifth respectively. These counties also have high income levels which both affect the demand for quality housing and the ability to pay for maintenance and upgrading the housing stock (see Table 33). Residents of the rural counties, especially those in the Lower Eastern Shore, have lower incomes and cannot afford the same level of housing quality. The Western Maryland counties of Garrett and Allegany rank relatively low although slightly above the Eastern Shore.

TABLE 32

HOUSING QUALITY

JURISDICTION	SCORE (10 20 30 40 50 60 70 80 90 100)	1970 INDEX	1970 RANK
ALLEGANY		65.82	12
ANNE ARUNDEL		91.80	5
BALTIMORE		92.83	4
CALVERT		45.02	15
CAROLINE		29.71	21
CARROLL		74.23	8
CECIL		67.99	10
CHARLES		72.33	9
DORCHESTER		20.42	23
FREDERICK		67.23	11
GARRETT		33.60	19
HARFORD		90.76	6
HOWARD		99.23	2
KENT		30.77	20
MONTGOMERY		100.00	1
PRINCE GEORGE'S		97.52	3
QUEEN ANNE'S		33.79	18
ST. MARY'S		63.36	13
SOMERSET		0.00	24
TALBOT		34.57	17
WASHINGTON		76.53	7
WICOMICO		50.61	14
WORCESTER		27.36	22
BALTIMORE CITY		36.44	16
AVERAGE FOR ALL COUNTIES		58.41	
LESS BALT. CITY		59.37	
URBAN COUNTIES		83.90	
RURAL COUNTIES		43.12	

Note: Indicator values have been scaled between 0 and 100 to provide a frame of reference.

The City of Baltimore, which ranks 16th, must be considered separately from the urban counties. Its low rank is directly attributable to an aged housing stock, huge proportion of substandard housing, and low income levels. This condition, not untypical in older major cities, reflects a serious urban problem which is reinforced by the relatively low level of replacement activity discussed in the housing availability indicator.

TABLE 33

SUBSTANDARD HOUSING CONDITIONS

1970

JURISDICTION	PERCENT SUBSTND UNITS[1]	PERCENT UNITS W/O PLUMBING[2]	PERCENT UNITS W/O HEAT	PERCENT UNITS OVERCROWDED[3]
ALLEGANY	7	7	***	5
ANNE ARUNDEL	4	3	1	7
BALTIMORE	2	1	***	4
CALVERT	19	18	4	15
CAROLINE	20	17	2	7
CARROLL	8	7	***	6
CECIL	10	8	1	8
CHARLES	16	15	1	14
DORCHESTER	20	20	1	7
FREDERICK	11	10	***	6
GARRETT	17	16	***	11
HARFORD	6	5	***	7
HOWARD	4	4	***	5
KENT	19	18	2	7
MONTGOMERY	1	1	***	3
PRINCE GEORGE'S	1	1	***	6
QUEEN ANNE'S	20	19	1	7
ST. MARY'S	11	11	1	13
SOMERSET	32	30	3	9
TALBOT	13	12	1	***
WASHINGTON	9	9	***	6
WICOMICO	12	11	1	6
WORCESTER	14	12	3	9
BALTIMORE CITY	2	1	***	8

*** Less than 1 percent

Source: U.S. Bureau of the Census, Detailed Housing Characteristics, 1970, HC(1)-B22, Maryland, Tables 60, 62.

[1] Lacking some or all plumbing facilities.
[2] Lacking some or all plumbing facilities except hot water.
[3] Percent units overcrowded is defined to be greater than 1.01 persons per room.

XII. DEVELOPMENT OF SOCIAL POTENTIAL

INTRODUCTION

Social potential measures are intended to reflect the capacity of individuals to achieve stable interpersonal relationships and to cope with the demands of their communities and society. Conceptually, social potential is based upon social theories of normal development, self-sufficiency, and socialization.

Three social potential indicators were originally postulated to reflect status by geographic area and for the State as a whole: (1) family structure, (2) well-being of children, and (3) welfare of the aged.

Family structure was viewed as important because it is the social environment for the majority of persons. In addition, families provide the setting in which social potential of future generations is formed. Well-being of children reflects factors associated with the social potential of children, the major socially dependent group in the social structure. This area is also important because it provides an indication of the social potential of the next generation of adults.

Welfare of the aged reflects current status of social potential among the elderly, a population group with a high probability for becoming socially isolated and dependent upon the community.

Unfortunately, data were not available to develop a meaningful indicator for the aged. In addition, key 1973 data were not available for the other two indicators, which made it impossible to develop these indicators for 1973. This section is somewhat limited in its presentation by its reliance on 1970 census data for many statistics.

FAMILY STRUCTURE

The social indicator of status of family life is built upon statistics that reflect the proportion of families with children and that measure family breakdown. Most

individuals live in family settings at one time or another. The proportion of persons married and living in a family setting is a significant factor of community life. Birthrates also reflect changes in patterns of family life. Divorces and annulments are known to influence child development as well as impact upon the adults involved, as they influence the stability and continuity of their environment. Rates of illegitimacy reflect living patterns and changes in community value systems as well as technological and medical developments. The proportion of families below the poverty level measures the ability of families to provide basic physical elements required for child development and adult satisfaction.

WELL-BEING OF CHILDREN

The statistics associated with this indicator reflect the relative size and welfare of the child and youth population as well as the problem conditions that they are experiencing that can affect their capacity for normal development.

The proportion of children and youth cared for outside their own homes on a 24-hour basis is considered significant because of the impact on the child of separation from his/her own home and the possible breakdown of continuity of adult relationships and supervision. Placement outside his/her own home may reflect a child's own problem, or the problems that his/her parents are experiencing. Unfortunately, much of the information is not available.

Other statistics reflect additional problems and conditions generally considered to be significant for normal child development.

- Children who are abused or neglected reflect a situation that is likely to impact the children's emotional growth and safety. This has serious implications for the children involved.

- Children who have contacts with the juvenile court may be demonstrating antisocial behavior or may be in need of supervision because of a breakdown of their family.

- Number of adoptions measures the number of children for whom new legal homes have been found.

- Number of children in homes below the poverty level represents situations where children may not receive their basic requirements for shelter, food, and clothing. The difficulties encountered in maintaining life at low levels of income can affect the interaction of parents with each other and with their children.

- Number of working mothers with children under 6 years of age reflects the size of the group of children who require care by others rather than by their own parents during part of the day.

WELFARE OF THE AGED

Complete data for this indicator were not available. It had been hypothesized that statistics associated with this indicator should reflect numbers of aged, relative poverty, health status, living arrangements, and access to services. These should measure the group that may require some form of assistance from the community. As new health practices extend the life span and the nuclear family becomes less able to cope with the problems of elderly relatives, increasing numbers of older persons may require outside assistance. These are important factors for planning services and setting priorities for the aged.

The proportion of the aged who are below the poverty level would reflect those who are unable to be self-sustaining and for whom society has a special responsibility. The numbers receiving Supplementary Security Income (SSI) would represent those who are currently unable to fully support themselves through their own employment or their retirement benefits.

The proportion living in group residential care facilities (e.g., hospitals, nursing homes, homes for the aged) would identify resources available for individuals unable to maintain independent living arrangements. The number of aged persons living in subsidized housing for the elderly would present some indication of the degree to which affordable housing for low income aged persons is available.

The proportion covered by Medicare would reflect much of the group with insurance to cover their health care costs. Incidence of health problems, including disabilities, would measure the health status of the aged.

A high proportion of elderly persons owning automobiles, which serves as a measure of accessibility to services and to other individuals, especially in rural and urban communities, was also considered desirable.

FAMILY STRUCTURE

This indicator is composed of population and income statistics in combination with statistics depicting families with children, the birthrate, and measures of family breakdown. Population statistics cover the full range of ages and white/non-white distributions. Income statistics were classified into four ranges. Statistics used in the indicator, and for which data could be secured for 1970, were as follows:

- percent of all families who have children;
- births per 1,000 women of child-bearing age;
- percent of all white births that are illegitimate;
- percent of all non-white births that are illegitimate; and
- number of divorces and annulments per 10,000 population.

The four income statistics had a strong influence on the scores. Low income (under $10,000 annually) depressed the scores, while high income raised the scores. The scores were also strongly influenced by the population statistics: white children aged 0 to 17 had a strong positive influence, while white aged persons, over 64 years, had a strong depressing effect. The non-white population factors had less impact, perhaps because of the smaller absolute number of non-whites in the State.

A number of the unique statistics selected for this indicator had statistically strong impact on the scores. The percent of families with children was the strongest in positive impact. Illegitimate births had significant negative impact. Divorces and annulments also had a negative impact on the score. Birthrate had a positive impact, but of somewhat less power.

As shown in Table 34, all of the urban counties ranked high, while the Eastern Shore counties ranked low. The Western Maryland counties and Frederick County fell within the mid-range. It is noteworthy that the City of Baltimore ranked 22nd, just above the two lowest ranking Eastern Shore counties: Somerset and Dorchester.

The results of this indicator appear logical and reasonable. There are relatively narrow ranges of rankings represented in counties generally viewed as having similar characteristics. It is possible that social and demographic differences among the counties may be significantly influencing family structure in these counties. These similarities may arise from similar community mores and attitudes toward having and raising children, and maintaining families. Further study is suggested to better understand these rankings.

In assessing this indicator, it is important to note that almost all the statistics influenced the indicator, as hypothesized. In addition, the unique statistics selected to measure family structure were statistically significant (see Table 35). While the indicator raises a number of questions for further study, it provides an initial basis for development of a potentially strong indicator.

TABLE 34

FAMILY STRUCTURE

INDICATORS

JURISDICTION	SCORE (10 20 30 40 50 60 70 80 90 100)	1970 INDEX	1970 RANK
ALLEGANY		44.37	15
ANNE ARUNDEL		76.32	7
BALTIMORE		74.09	8
CALVERT		52.14	13
CAROLINE		40.00	16
CARROLL		71.92	9
CECIL		62.09	10
CHARLES		96.13	2
DORCHESTER		0.0	24
FREDERICK		56.42	12
GARRETT		60.06	11
HARFORD		89.4	3
HOWARD		100.0	1
KENT		22.19	18
MONTGOMERY		88.0	5
PRINCE GEORGE'S		88.27	4
QUEEN ANNE'S		39.0	17
ST. MARY'S		76.54	6
SOMERSET		1.3	23
TALBOT		18.89	19
WASHINGTON		47.59	14
WICOMICO		16.96	21
WORCESTER		18.14	20
BALTIMORE CITY		6.61	22
AVERAGE FOR ALL COUNTIES		51.93	
LESS BALT. CITY		53.9	
URBAN COUNTIES		76.75	
RURAL COUNTIES		37.04	

Note: Indicator values have been scaled between 0 and 100 to provide a frame of reference.

TABLE 35

FAMILY STRUCTURE

1970

JURISDICTION	% FAMILIES WITH CHILD < 25	BIRTHS PER 1,000 WOMEN OF CHDBG AGE (15-45)	PERCENT WHITE ILLEG BIRTH	PERCENT NONWHITE ILLEG BIRTH	DIVORCES & ANNULMENTS PER 10,000
ALLEGANY	57	78.96	5	50	33.90
ANNE ARUNDEL	67	80.73	5	42	31.05
BALTIMORE	65	67.61	4	24	30.67
CALVERT	59	112.25	5	57	37.55
CARCLINE	56	89.75	5	57	23.17
CARROLL	62	81.91	5	31	23.44
CECIL	66	98.78	7	46	38.91
CHARLES	72	107.35	4	48	17.47
DORCHESTER	53	71.10	12	62	42.76
FREDERICK	62	84.62	7	52	32.87
GARRETT	62	93.79	7	***	27.92
HARFORD	69	88.58	5	31	25.80
HOWARD	69	75.04	3	29	13.80
KENT	55	79.75	6	47	40.18
MCNTGCMERY	68	70.40	4	19	26.17
PRINCE GEORGE'S	69	88.79	5	21	32.55
QUEEN ANNE'S	57	77.90	2	61	22.04
ST. MARY'S	70	125.39	3	44	41.39
SCMERSET	54	80.35	5	66	40.06
TALBOT	53	77.71	9	65	34.86
WASHINGTON	60	83.37	7	33	50.74
WICCMICO	59	77.68	6	62	56.43
WORCESTER	54	81.37	8	63	32.36
BALTIMORE CITY	58	85.58	9	53	52.13

*** Less than 1 percent

Sources: 1) U.S. Bureau of the Census, Census of Population, 1970, General Social and Economic Characteristics, Final Report PC(1)-C22, Maryland.
2) Maryland State Department of Health and Mental Hygiene, Center for Health Statistics, Annual Vitel Statistics Report, 1970.

WELL-BEING OF CHILDREN

This indicator is composed of population and income statistics combined with statistics depicting problem conditions being experienced by children. Population statistics cover the full range of ages and white/non-white distributions, and income statistics were classified into four ranges of incomes. Children's problem conditions, for which data could be secured for 1970, were as follows:

- abused children per 10,000 children;
- completed adoptions per 10,000 population;
- percent of juvenile cases with a formal disposition by the court;
- percent of juvenile cases closed at intake in the courts and disposed of informally;
- number of juvenile cases in the courts per 10,000 children and youths, aged 5 to 17 years;
- monthly average of children in foster care per 10,000 children (this statistic is by county of placement, not of parental residence); and
- percent of women in the labor force with children under 6 years old.

The statistics that influenced the indicator most strongly were the four income statistics. Annual income under $20,000 had a negative effect on the score; income over $20,000 had a positive impact. The next most powerful variable was that of population over 64 years, which had a negative influence.

All of the special statistics selected to manifest children's problems had a depressing effect upon the scores. However, none of these statistics had the loadings represented in the high population and income statistics noted above. The three most significant were the variables on children in foster care, working mothers of young children, and percent of juvenile cases with formal dispositions.

The urban counties averaged much higher scores than did the rural counties (Table 36), representing the fact that there are more children and that they live in higher income families in the more populated areas. It is interesting that St. Mary's County, ranked fifth. This suggests a similarity of conditions in that county with the other suburban counties.

It is noteworthy that the City of Baltimore ranked 22nd, among the lowest ranking counties, which somewhat supports other information on the City regarding a concentration of low income and the problems affecting children. The Eastern Shore counties also ranked low, with a range from Dorchester which was 14th to Somerset which was 24th. In Worcester County, which includes Ocean City, it is interesting that the number of juvenile cases per 10,000 juveniles is much higher than others in the State (80.4 compared to 36.9 in the next highest county). This appears to result from the large number of offenses committed by juveniles who visit but do not reside either in Ocean City or Worcester County. This large number of cases is divided by the number of juveniles who reside in Worcester County, resulting in a high per capita rate.

The range of rankings of the Western Maryland counties should be studied further: Garrett, 1; Allegany, 8; and Washington, 11. These three counties are included in the area served by the Appalachian Regional Commission programs and have received funds for child development and educational programs.

The results of this indicator as described appear to be reasonable and logical. However, the statistics presented in Table 37 do not represent a number of factors that were hypothesized as being important. The data were not available for those statistics. Nor were the data available for 1973. The data that are most powerful in this indicator are from the 1970 census.

This indicator requires further research to strengthen the data unique to the area of well-being of children. This indicator now appears to validly reflect concentrations of children, the impact of high and low income, and children's problems.

TABLE 36

WELL-BEING OF CHILDREN

JURISDICTION	SCORE 10 20 30 40 50 60 70 80 90 100	1970 INDEX	RANK
ALLEGANY		86.91	8
ANNE ARUNDEL		88.28	7
BALTIMORE		93.77	3
CALVERT		78.20	12
CAROLINE		16.19	23
CARROLL		75.8	13
CECIL		55.02	20
CHARLES		84.31	9
DORCHESTER		73.57	14
FREDERICK		62.98	17
GARRETT		100.0	1
HARFORD		84.3	10
HOWARD		88.61	6
KENT		57.17	19
MONTGOMERY		94.13	2
PRINCE GEORGE'S		90.58	4
QUEEN ANNE'S		52.2	21
ST. MARY'S		90.03	5
SOMERSET		0.0	24
TALBOT		72.87	15
WASHINGTON		82.76	11
WICOMICO		66.84	16
WORCESTER		57.74	18
BALTIMORE CITY		28.9	22
AVERAGE FOR ALL COUNTIES		70.05	
LESS BALT. CITY		71.84	
URBAN COUNTIES		80.97	
RURAL COUNTIES		63.5	

Note: Indicator values have been scaled between 0 and 100 to provide a frame of reference.

TABLE 37

WELL-BEING OF CHILDREN

INDICATORS

1970

JURISDICTION	ABUSED CHILDREN PER 10,000	COMPLETED ADOPTIONS PER 10,000	% JUV CASES FORMALLY DISPOSED	% JUV CASES CLOSED AT INTAKE	JUV CASES PER 10,000 JUV (5-17)	AVE MONTHLY FOSTER CARE RECIPIENTS	% WOMEN IN L.F. WITH CHILD <6
ALLEGANY	6.10	9.64	95	***	16.42	45.39	20
ANNE ARUNDEL	2.29	7.07	43	2	18.84	43.16	27
BALTIMORE	1.74	6.65	51	4	18.83	30.53	26
CALVERT	5.65	4.81	37	***	21.50	65.50	34
CAROLINE	1.46	4.04	54	29	15.78	207.60	33
CARROLL	0.87	8.50	46	35	12.96	71.18	36
CECIL	5.20	8.99	32	***	18.94	119.06	31
CHARLES	***	4.58	30	***	21.00	52.01	32
DORCHESTER	2.15	***	78	***	16.86	75.35	42
FREDERICK	1.01	3.52	31	28	19.82	100.74	34
GARRETT	2.53	11.63	86	3	6.05	14.54	23
HARFORD	2.51	9.03	52	9	21.26	52.21	26
HOWARD	4.55	6.07	55	***	26.43	42.65	25
KENT	9.60	6.81	72	15	34.16	113.24	35
MONTGOMERY	2.36	6.07	55	***	17.60	30.05	26
PRINCE GEORGE'S	2.53	9.71	56	1	31.11	37.66	36
QUEEN ANNE'S	1.61	5.41	96	3	24.28	124.60	39
ST. MARY'S	1.55	13.24	65	21	10.69	38.28	25
SOMERSET	1.62	9.52	52	***	19.67	244.33	43
TALBOT	1.36	0.42	36	52	20.72	72.24	44
WASHINGTON	3.47	7.78	89	1	21.64	55.23	28
WICOMICO	0.54	11.22	65	***	17.11	91.11	48
WORCESTER	***	13.38	19	6	80.40	112.04	39
BALTIMORE CITY	17.55	7.14	76	7	36.94	177.93	44

*** Less than 1 percent

Sources; 1) Department of Employment and Social Services, Annual Report, 1970.

2) Maryland Department of Health and Mental Hygiene, Department of Juvenile Services, Annual Report, 1970.

3) U.S. Bureau of Census, Census of Population, 1970, General Social and Economic Characteristics Final Report, PC(1)-C22, Maryland.

It is interesting to note that there appears to be some correspondence in the ranking of the indicators of family structure and well-being of children. More than half of the counties fall in the same third on both indicators.

XIII. RECREATIONAL OPPORTUNITIES

This activity sector is concerned with the demand and supply of outdoor recreational opportunities within the State of Maryland. The lack of annual data at the county level precludes the construction of a social indicator for recreational opportunity. The types of data which would be required to construct an indicator of this type are the actual number of recreation trips (i.e., swimming, boating, etc.) generated by county and conversely, the actual number of recreation trips which occurred in a county. Although recreation trip data are not available, it is possible, for the year 1970-1971, to examine public sector facility availability and demand for public sector facilities.

The social statistics presented provide an indication of the present status of the population in terms of public recreational activity patterns. The statistics presented for this activity sector are: (1) public outdoor recreation and open space acreage by use categories, (2) total in-state and out-of-state annual and peak season demand occasions (i.e., the number of times a person participates in a different recreational activity) by region and activity, and (3) public ownership of outdoor recreational and open space by planning regions. Although these statistics provide a basic measure of the demand and supply of public recreational opportunities, the lack of data on private facilities precludes presenting a complete picture of the recreational opportunities available.

The demand generated by the large urban areas, which contain a major share of the State's population, is much greater than the available recreational space within these areas. The Baltimore region, due to the large population concentration, has the largest number of demand occasions for recreation in the State (see Table 38). Southern Maryland has the least number of demand occasions for recreation.

Western Maryland has the largest amount of public open space and recreational acreage (see Table 39) with the bulk of its acreage in natural environments. The least amount of publicly owned open space and recreational acreage is in Southern Maryland.

TABLE 38

SUMMARY OF TOTAL IN-STATE AND OUT-OF-STATE ANNUAL AND PEAK SEASON DEMAND OCCASIONS BY REGION AND ACTIVITY FOR 1970 (in thousands)*

Activities	Western Maryland/ Frederick County		Baltimore		Sub. Washington		Southern Maryland		U. Eastern Shore		L. Eastern Shore	
	Annual	Peak	Annual	Peak	Annual	Peak	Annual	Peak	Annual	Peak	Annual	Pe
Attending Outdoor Concerts	134.2	77.0	1,901.6	1,090.0	1,112.0	638.0	41.9	24.0	61.0	35.0	55.8	3
Attending Outdoor Sports	414.5	141.0	13,165.3	4,478.0	4,439.4	1,510.0	505.7	172.0	373.4	127.0	352.8	12
Bicycling	306.0	91.0	2,081.7	619.0	1,187.1	353.0	107.6	32.0	127.8	38.0	121.1	3
Boating	156.4	86.0	4,864.0	2,674.0	2,934.0	1,613.0	1,524.3	838.0	1,495.2	822.0	1,664.4	91
Camping	2,852.4	1,372.0	434.5	209.0	975.7	625.0	592.5	285.0	278.6	134.0	993.8	47
Driving for Pleasure	5,543.9	1,511.0	22,135.1	6,033.0	29,627.2	8,075.0	9,704.5	2,645.0	9,322.9	2,541.0	9,132.1	1,48
Fishing	3,155.8	1,704.0	2,146.5	1,159.0	3,137.3	1,694.0	1,983.5	1,071.0	2,407.6	1,300.0	2,422.4	1,30
Hiking	543.1	267.0	581.7	286.0	750.5	369.0	356.0	175.0	473.9	233.0	242.0	11
Horseback Riding	1,008.5	390.0	2,001.6	774.0	2,172.2	840.0	912.9	353.0	729.3	282.0	328.4	23
Hunting	3,096.2	1,596.0	452.0	233.0	161.0	183.0	1,177.6	607.0	1,600.5	825.0	1,327.0	68
Ice Skating	426.4	418.0	705.8	692.0	616.1	604.0	146.9	144.0	250.9	246.0	130.6	12
Nature Walks	726.8	297.0	6,212.9	2,539.0	3,628.9	1,483.0	271.6	111.0	332.8	136.0	298.5	12
Picnicking	4,745.1	1,516.0	11,030.1	3,524.0	12,063.0	3,854.0	4,551.0	1,454.0	4,313.1	1,378.0	4,047.1	1,29
Playing Outdoor Sports	5,439.0	1,672.0	51,416.9	15,806.0	31,313.4	9,626.0	1,877.0	577.0	2,472.3	760.0	2,166.5	66
Sightseeing	3,763.5	1,473.0	8.865.9	3,470.0	5,988.9	2,344.0	3,462.0	1,355.0	5,419.2	2,121.0	5,631.2	2,20
Sledding & Tobogganing	378.8	337.0	4,556.7	3,995.0	2,762.8	2,458.0	120.3	107.0	142.7	127.0	125.8	21
Snow Skiing	901.1	801.0	140.6	125.0	270.0	240.0	15.8	0	1.1	1.0	0	
Swimming Beach	155.4	121.0	4,469.6	3,481.0	2,964.8	2,309.0	3,674.8	2,862.0	346.7	2,700.0	6,809.1	5,30
Swimming Pool	989.8	829.0	9,198.6	7,164.0	5,303.7	4,442.0	363.0	304.0	426.3	357.0	523.9	35
Walking for Pleasure	8,242.7	2,214.0	68,845.7	18,492.0	40,506.2	10,880.0	2,825.8	759.0	3,548.0	953.0	3,544.3	95
Water Skiing	90.2	67.0	822.4	611.0	284.0	211.0	674.3	501.0	1,140.1	245.0	729.5	54
TOTAL	43,069.8	16,980.0	216,029.2	77,455.0	151,898.2	53,951.0	34,889.0	14,376.0	35,263.4	15,370.0	40,545.3	17,9

*Figures are rounded to the nearest hundreds.

Source: Maryland Outdoor Recreation and Open Space Plan, Comprehensive Plan II, November 1972.

TABLE 39

PUBLIC OUTDOOR RECREATION AND OPEN SPACE ACREAGE BY USE CATEGORIES* BY COUNTY AND PLANNING REGIONS, 1970-71

Use Category	Neighborhood	Community	Metro-Regional	City-Wide	Urban Open Space	General Outdoor	Naturel Environment	Outstanding Natural	Wilderness Primitive	Historic Cultural	Unclassified	Total
Western Maryland & Frederick Regions												
Allegany	90	24	0	96	52	387	41,516	20	0	0	1,618	43,803
Garrett	0	5	0	80	30	1,035	75,077	40	2,100	348	0	78,751
Frederick	47	124	8,020	53	0	6,599	8,707	30	0	8	0	23,588
Washington	25	115	0	63	0	526	5,075	0	0	21	3,128	8,953
												155,095
Suburban Washington Region												
Prince George's	0	1,220	719	158	0	9,443	37	0	0	0	595	12,172
Montgomery	928	495	2,115	239	3,913	296	1,789	0	0	166	900	11,841
												24,013
Baltimore Region												
Baltimore City	403	806	3,109	427	94	80	0	4	0	0	1,007	5,930
Baltimore County	1,134	692	494	0	46	208	9,156	0	0	0	3,999	15,729
Anne Arundel	265	852	498	48	0	74	753	0	29	10	2,134	4,663
Harford	0	29	0	150	0	545	1,321	0	16,000	3	0	18,048
Howard	20	0	0	0	901	106	0	0	0	0	4,627	5,654
Carroll	0	79	0	0	0	162	0	0	0	0	1,149	1,390
												51,414
Southern Maryland Region												
Calvert	0	0	230	0	0	288	313	0	0	0	0	831
Charles	0	0	0	0	0	1,771	3,204	0	0	10	1,194	6,179
St. Mary's	244	94	0	0	0	209	572	0	0	0	0	1,119
												8,129
Upper Eastern Shore												
Cecil	7	150	0	0	126	801	4,237	0	0	0	662	5,983
Kent	38	7	71	0	0	15	3,134	0	0	0	514	3,779
Caroline	0	0	0	0	0	30	2,028	12	0	0	0	2,070
Talbot	0	0	0	0	0	0	185	0	0	1	0	186
Queen Anne's	6	170	10	1	0	26	0	0	0	0	0	213
												12,131
Lower Eastern Shore												
Worcester	0	35	0	0	0	164	20,276	100	394	1	1,758	22,727
Dorchester	0	32	0	0	0	0	24,274	0	0	0	0	24,306
Wicomico	58	86	105	72	0	0	3,023	0	0	0	194	3,542
Somerset	0	0	0	42	0	142	15,749	0	6,896	0	0	22,787
									Grand Total, State of Maryland			324,244

Source: Maryland Outdoor Recreation and Open Space Plan, Comprehensive Plan II, November 1972.

*Leased land, resevoir land, military reservations, game and inland fishland are excluded from figures.

The public ownership of recreational areas reflects an interesting pattern (see Table 40). In affluent Montgomery County the local government owns almost 75 percent of the recreational area, although in less affluent rural counties, the State government or Federal government own most of the recreational areas. Other jurisdictions which have sizeable locally owned acreage are the City of Baltimore, Baltimore County, and Anne Arundel County.

TABLE 40

PUBLIC OWNERSHIP OF OUTDOOR RECREATION AND OPEN SPACE AREAS BY COUNTY PLANNING REGIONS, 1971

Region and County	OWNERSHIP				
	Federal	State	Local	Total Acres	
Western Maryland & Frederick Regions	10,339	135,965	8,791		155,095
Allegany	1,188	42,501	114	43,803	
Garrett	0	78,746	6	78,751	
Frederick	5,769	9,468	8,351	23,588	
Washington	3,382	5,250	321	8,953	
Suburban Washington Region	6,421	7,795	9,797		24,013
Prince Georges	5,769	4,057	2,346	12,172	
Montgomery	652	3,738	7,451	11,841	
Baltimore Region	17,826	17,692	15,896		51,414
Baltimore City	86	0	5,844	5,930	
Baltimore County	45	9,262	6,422	15,729	
Anne Arundel	1,695	1,163	1,805	4,663	
Harford	16,000	1,367	681	18,048	
Howard	0	4,733	921	5,654	
Carroll	0	1,167	223	1,390	
Southern Maryland Region	10	7,159	960		8,129
Calvert	0	313	518	831	
Charles	10	6,158	11	6,179	
St. Mary's	0	688	431	1,119	
Upper Eastern Shore Region	3,653	7,948	630		12,231
Cecil	1,369	4,332	282	5,983	
Kent	2,284	1,367	128	3,779	
Caroline	0	1,920	150	2,070	
Talbot	0	159	27	186	
Queen Anne's	0	170	43	213	
Lower Eastern Shore Region	23,929	48,989	444		73,362
Worcester	8,400	14,261	66	22,727	
Dorchester	11,216	13,058	32	24,306	
Wicomico	0	3,238	304	3,542	
Somerset	4,313	18,432	42	22,787	
				TOTAL STATE	324,244

Source: Maryland Outdoor Recreation and Open Space Plan, Comprehensive Plan II, November 1972.

APPENDIX A

CASE STUDY

APPENDIX A

CASE STUDY

To demonstrate how the social indicators could be used by program managers, planners, and decision makers, the staff of the Department of State Planning developed the following case study. The indicator for health status was selected for this effort. This area was meant to be an example; hypotheses and tests could be developed for each indicator.

The method used in the case study was to examine the results of the social indicator for interesting and significant findings. Explanations of the findings were hypothesized based on other indicators, known socioeconomic characteristics of the area, and program data. Statistical tests to determine the validity of these assumptions are suggested as the next step. These tests would help to identify the most significant factors contributing to the condition. Knowledge about contributing factors would be essential in determining which actions would be most likely to produce desired change in the condition. If such additional research is conducted, the indicators will have considerable importance in selecting the most desirable forms of action.

It is recognized that developing hypotheses and conducting statistical tests will require considerable time and expertise. The staff of the Department of State Planning would like to work with program level and research staffs in the State agencies to conduct such work.

CASE STUDY - HEALTH STATUS OF THE EASTERN SHORE

The health indicators for the Eastern Shore were chosen for this case because the indicator and data tables show health status on the Eastern Shore to be considerably below the health status of the rest of the State. This case study is for illustrative purposes only, and thus problem areas and questions will be pointed out.

Further research was not conducted by State Planning, but hopefully interested agency personnel will conduct further analyses.

Ranking all counties in Maryland from 1 to 24, with 1 being the highest, the nine Eastern Shore Counties were ranked as follows:

UPPER SHORE	1970	1973
Caroline	19	19
Cecil	5	9
Kent	15	17
Queen Anne's	16	15
Talbot	22	18
LOWER SHORE		
Dorchester	23	23
Somerset	20	22
Wicomico	18	21
Worcester	21	20

Except for Cecil County (which is influenced by the Wilmington SMSA), the Eastern Shore has the poorest health status in the State, and as shown above, there was no significant improvement between 1970 and 1973.

The examples discussed in this study were chosen to represent a wide variety of special analyses which could be conducted to demonstrate relationships between health indicators and program management information. The source of much of the data was annual Vital Statistics reports. The social indicator framework, however, allows inter-county comparisons and the ability to numerically rank health status.

Age distribution statistics show the population to be older for the Eastern Shore. The percent of elderly for both whites and non-whites is generally increasing. This suggests that programs providing services to the aged should receive a higher priority in this region than, for example, in Montgomery County or some of the suburban Baltimore Counties (e.g., Carroll and Baltimore) where populations are much younger. Programs such as Geriatric Evaluation Service, Meals on Wheels, and home health care programs which serve elderly target groups could be examined to see if they are available and in adequate supply. In addition, the utilization rates for long-term care facilities should be examined to determine the adequacy of these facilities. It may also be interesting to identify the number of elderly patients served by Deer's Head and Eastern Shore State Hospitals and determine their origin or place of residence. The presence of these facilities may be skewing the mortality and morbidity rates for the region.

As a second example, morbidity rates were examined. These statistics show a high incidence of tuberculosis and influenza, and recent national reports indicate that Maryland ranks above the national average for the incidence of TB. Several Department of Health and Mental Hygiene programs could be examined to see their response to this problem.

- What is the level of TB screening programs offered by the Preventive Medicine Administration?

- Has the patient census at Mt. Wilson State Hospital Center been increasing or decreasing? Are any Hospital outreach programs offered on the Eastern Shore?

- Public immunization programs could be examined.

In addition to a high incidence of TB and influenza, the rates for heart disease, cancer, and stroke are also increasing on the Eastern Shore and are not keeping pace with improvement elsewhere in the State. These diseases are the major causes of death statewide.

Statewide, the range in 1970 for heart disease was from a high of 60.45 deaths per 10,000 to a low of 18.00 and the median was 39.6 deaths. For cancer, the range was 18.41 deaths per 10,000 to 3.95 with the mode being 15.42. The range for stroke was 21.68 deaths per 10,000 to 2.72 with the median 7.89 deaths. In 1973, the death rate statewide for heart disease ranged from 59.24 per 10,000 to 16.04 with the median 37.74; cancer ranged from 19.60 per 10,000 to 7.06 with 13.87 the median; and the range for stroke was 17.21 per 10,000 to 2.33 with the median 7.97. Most of the counties in the Eastern Shore are well above the median/mode rates. Somerset County had the highest rate of cancer and second highest rate of stroke of all Maryland Counties (1973), and Caroline County had the second highest incidence of heart disease. Also, Eastern Shore death rates are increasing at a higher rate than the rest of the State; this may be partially explained by the high proportion of elderly in the population of the region.

Another way to analyze this data is to arrange the nine counties according to numerical rank as compared to the remaining 15 Maryland counties; one being the county with the least incidence and 24 being the county with highest disease incidence.

RANKING OF THREE MAJOR CAUSES OF DEATH, 1973

	HEART	CANCER	STROKE
Caroline	23	18	20
Cecil	8	6	6
Dorchester	21	21	19
Kent	19	15	15
Queen Anne's	15	14	12
Somerset	22	24	23
Talbot	17	16	10
Wicomico	14	19	22
Worcester	20	20	24

The above again demonstrates the differences between Cecil County and the other Eastern Shore Counties. It also points out the particularly poor health status of Somerset County.

What does this tell health planners and programmers? Following are some examples of how the data could be further studied.

1. Patient origin studies could be conducted by State hospitals, especially Montebello and Deer's Head, to determine the percentage of the patients served who are from Eastern Shore Counties.

2. The Regional Medical Program (RMP) is now being phased out and combined into Health Systems Agencies. Its major purpose was to provide grants for projects to ameliorate and/or reduce the incidence of heart disease, cancer, and stroke. A retrospective evaluation of RMP grants which benefited the Eastern Shore population would help determine the effectiveness of this program and also help the new HSA's in determining planning priorities.

3. The role and level of voluntary health agencies such as the Heart Association and Cancer Society could be examined. This includes the effectiveness of preventive programs and health education offered by these voluntary groups.

4. The health resources available to this region could also be studied to determine their adequacy. Resources such as number and types of health manpower (e.g., physicians, nurses, allied health personnel, etc.) in practice and the number and types of health facilities (e.g., hospitals, clinics, HMO's) could be inventoried to determine availability and number of patients served. In addition, the availability and level of health care financing (e.g., Blue Cross/Blue Shield, private insurance, Medicare/Medicaid) available to patients with heart disease, cancer, or stroke could be researched.

5. An analysis of certain demographic data such as age distribution, percent non-white population, etc., may be an interesting corollary to the utilization of health resources analyses. This will help tell whether health services are available and utilized by high risk populations.

The mental health indicator was not developed due to the inadequacy and unavailability of necessary data. Nonetheless, the statistical tables included in the report point out several serious mental health problems. Suicide rates reflect one measure of poor mental health. The data for deaths by suicide statewide for 1973 were highest for Queen Anne's and Talbot Counties. For Talbot this represents a significant increase since 1970. However, Worcester County had the largest decrease in suicide. A survey of existing mental health programs such as community mental health centers, psychiatric inpatient and outpatient programs, crisis intervention services, hot lines, availability of psychiatrists, psychologists and other mental health professionals may determine if more programs are needed in Talbot and Queen Anne's or were notably effective in Worcester County.

Cirrhosis of the liver may be used as a surrogate measure for alcoholism. Again, rates are high for Talbot and Queen Anne's Counties with the trend increasing, but for Worcester there is a noticeable decrease. The relative availability of the previously mentioned mental health programs plus alcoholism programs offered by local health departments and Alcoholics Anonymous could be examined to see if they explained the increase and decrease. This significant level of mental health problems on the Eastern Shore seems counter to the theory which correlates poor mental health with dense urban living situations. Further research is definitely needed on this subject.

The preceding examples have been for regional or multicounty analysis. However, a single county could be selected for a specific case study. A good example of this is the high incidence of lung cancer in Somerset County for both 1970 and 1973. There are no major industries in this county according to the Directory of Maryland Manufacturers and Somerset County Community Economic Inventory. This seems to eliminate the cause as being primarily environmentally induced. Another possible cause could be excessive cigarette smoking. This could be verified by examining the cigarette retail sales tax. For program managers, the availability of anti-smoking programs and cancer screening and detection clinics should also be examined.

The preceding four examples suggested several causal relationships between health status indicators and the utilization of health resources. The health resource indicator was not calculated but tables were presented for facilities and manpower. More data are needed before any definitive conclusions can be made to support any causal relationships.

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